Index to Names

CONTRIBUTORS

Abrams, Kenneth, 951
Acland, Helen, 1836
Adair, Henry S. III, 2023
Adams, D. S., 295
Adams, William H., 935
Allison, Neil, 462
Allison, Thomas H., 1469
Ames, Trevor R., 1967
Amis, Terence C., 931
Anderson, Bruce C., 1110
Anderson, John F., 1064
Anderson, M. L., 1590
Anderson, Paul L., 877
Anderson, Wayne I., 455, 1823
Angarano, Donna W., 1492
Antelyes, Jacob, 229, 578, 854, 1226, 1597, 1938
Anthony, Russell H., 48
Arpin, D., 1077
Arthur, Donald G., 590
Atkins, Clarke E., 1463
Auer, J. A., 1147, 1992
Austin, Victor, 1352
Authement, Jennifer M., 477
Avgeris, Sophia, 921

Bagley, Clell V., 138
Bailey, Cleta Sue, 754
Bailey, Curtiss M., 1605
Bain, Fairfield T., 1259
Baird, A. N., 1147, 1992, 1999
Barsanti, Jeanne A., 1279
Bartges, Joseph W., 1276
Basaraba, Randall, 766
Batt, Roger M., 91
Bauer, Susan, 443
Bayly, W. M., 1820
Beale, Karin Muth, 745
Bean, Bruce, 1951
Beard, W. L., 453
Beasley, V. R., 100
Beaulieu, Andrew J., 1388
Bech-Nielsen, Steen, 1069
Beckman, Samuel L., 84
Bednarski, Richard M., 894
Beech, Jill, 465
Beehler, Bruce, 342
Behrens, Eddy, 1147
Bell, Ford W., 103
Bellah, Jamie R., 113
Bengtson, Amy E., 1474
Benson, Charles, 393
Beran, George W., 266
Berg, John, 917, 1003, 1474
Bernard, William V., 468, 1255
Besser, Thomas E., 1239
Bezek, David M., 590
Biery, Darryl N., 59
Biller, David S., 1288
Birchard, Stephen J., 2011
Bishop, Cynthia, 766
Bjorling, Dale, 2014
Black, Martin, 465
Blake, J. E., 1141
Blanchard, P., 1590
Blevins, William E., 1273, 1795, 2006
Bloom, John C., 465
Blythe, L. L., 316
Boddie, R. L., 890
Boever, William J., 131
Bolin, Carole A., 1601
Bolon, Brad, 323
BonDurant, Robert H., 885, 1590
Bonagura, John D., 2011
Bonge, Nicholas J., 1354
Boothe, Dawn Merton, 1297, 1502, 1659, 1845
Borges, Wendy L., 1470
Bosler, Ed, 1255
Bossart, Gregory D., 127
Bostwick, Eileen F., 1276
Bosworth, Q. W., 1102
Boy, Mary Gardiner, 632
Boyce, John R., 102, 1287
Boyce, Walter M., 126
Braden, T. D., 337
Bradley, Paul, 127
Bramson, Paul H., 1200
Braswell, Laura D., 1651
Braun, R. Kenneth, 1251
Brawner, Thomas A., 127
Brewer, N. R., 1378
Bright, Janice M., 1786
Brody, Marcia D., 224 (Insert)
Brooks, Dale L., 1139
Brooks, Dennis E., 1490, 1985
Brown, Cathy A., 1279
Brown, Corrie C., 2019
Brown, John, 1470
Brown, M. B., 1097
Brown, Scott A., 1279
Brown, Tom, 771
Bruecker, Kenneth A., 759
Bruss, Michael L., 1110
Buchanan, James W., 115
Buck, W. B., 100, 1768
Buelke, Donald L., 1942
Buergelt, Claus D., 1251
Buerger, R. G., 757
Bulgin, Marie S., 313, 1110, 1120
Burrows, George E., 1981
Burt, James K., 1831
Buyukmihci, Nedim C., 1490

Cabal, Carlos, 127
Callihan, D., 600
Cannon, L., 1095
Cantwell, H. Dan, 1483, 2006
Carakostas, Michael C., 10
Carbone, L., 1907
Cardinet, G. III, 1077
Carleton, C. L., 1641
Carlin, Stan, 13
Carlson, Gary P., 941, 2001
Caron, Joan, 127
Carter, Wayne O., 1829
Cassells, James A., 1601
Cechner, Paul, 84
Center, Sharon A., 1269
Chalmers, Stephanie, 1962
Chapman, Barbara L., 944, 947
Chen, Chao L., 745
Cheriuyot, H. K., 1090
Chesney, Russell W., 342
Chew, Dennis J., 1288
Ching, Shelley V., 1244
Christopher, Mary M., 1816
Church, Edgar M., 71
Clark, E. Susan, 468
Clark, L. K., 881
Clayton, Murray K., 894
Clemetson, Lisa L., 902
Cline, T. R., 881
Cliver, Suzanne, 12
Cogan, Deborah, 1738
Cohen, Daniel, 1255
Collins, James E., 897
Collins, James K., 1244
Constable, Peter D., 329, 627
Cook, J. R., Jr., 1291
Corapi, Wayne V., 590
Corbett, W. T., 96
Cornick, Janyce L., 420
Côté, L.-M., 1768
Cotter, Susan, 1006
Cowart, Ross P., 1262
Cowell, Rick L., 1995
Cowles, R. Reynolds, 1623
Cox, Judy H., 1827
Cribb, Alastair E., 521
Crowell, Wayne A., 1279
Cummings, John F., 77
Curtis, Charles R., 333
Curtis, Stephen K., 1139

Danaye-Elmi, C., 1590, 1945
Dardiri, Ahmed H., 2019
Dargatz, D. A., 605
Davenport, Deborah J., 635
Davidson, Michael G., 439, 1116
Davis, W. C., 583
DeBoer, Douglas J., 1083
DeBowes, Richard M., 1827
DeRock, Elfriede, 1962
DeCamp, C., 137
de la Cruz, Armah, 263
DiBartola, Stephen P., 1288
Dierckins, Mary Sue, 459
Dill, Stephen G., 455
Divers, Thomas J., 632, 1836
Dodds, W. Jean, 681
Doherty, Thomas J., 2009
Donahoe, John P., 1069
Donahue, William A., 1909
Donawick, William J., 768
Donoghue, Susan, 626
Dorman, D. C., 100
Dorn, A. S., 1834
Dougherty, Susan A., 1269
Douglass, James P., 1827
Draper, Donald D., 120
Dreesen, David W., 263, 266, 274
Dreyfuss, Daniel J., 768
Dryden, Michael W., 834, 1355
Dubey, J. P., 257, 259, 270, 287, 291, 295, 316, 347, 1095
Dubovi, Edward J., 590
Ducharme, Norm G., 455, 768
Duimstra, J. R., 316
DuFort, Robert M., 781
Dunayer, Eric, 184, 1006, 1905
Duncan, R. C., 110
Dzanis, D. A., 1269
Dziezyc, Joan, 1985

Eastridge, M. L., 1956
Eberhart, R. J., 1230
Ehnen, Sandra J., 468
Eicker, Steven, 1463
Eimstad, Eric A., 127
Einstein, M. E., 881
Elliott, R. Dean, 590
Ellis, J. A., 583, 1609
Elvinger, F., 1097
English, Robert V., 439, 1116
Erskine, R. J., 1230
Ettlinger, Jenni J., 1628

Fales, William, 771
Farin, P. W., 605
Feder, Brett M., 743
Fehrer-Sawyer, Susan L., 743
Fessler, J. F., 2006
Finco, D. R., 1279

Fingland, Roger B., 2011
Fischer, John, 771
Fish, Richard E., 1006, 1905
Flack, Duane E., 520
Foil, Carol S., 1284
Fooshee, Sharon K., 1265
Forbes, Lorry B., 911
Forbes, Stacey, 1273, 1285
Ford, Troy S., 121, 1628
Forfa, Richard J., 1623
Forrester, S. Dru, 1265
Fox, Michael W., 832
Francis, David H., 897
Franti, Charles E., 1459
František, Marec, 1908
Frantz, S., 881
Frazer, Ross L.,
Frederick, David, 1201
Freeman, David E., 121
Freeman, Lisa, 329
Frelier, Paul F., 1999
French, Tracy W., 590
Frenkel, J. K., 233, 240, 249

Gaafar, Sayed M., 834, 1355
Gabel, A., 1641
Galligan, David T., 632
Gardner, Ian A., 1791
Garg, Ramesh C., 1909
Garlick, David S., 2009
Garrett, Phillip D., 446
Gatewood, Donna M., 1827
Gaughan, Earl M., 455
Gay, Clive C., 1239
Gearhart, Martha S., 721
Geary, R. T., 1084
Gendron-Fitzpatrick, Annette, 459
Gentz, Edward J., 630
George, Jeanne Wright, 1654
Gilbert, Jeannine, 1614
Gillis, J. P., 462
Gilson, Stephen D., 1811
Goetz, Thomas E., 449
Goetzman, B. W., 2001
Gompf, Rebecca E., 56, 1392
Goodwin, John-Karl, 1044
Gosser, Harvey, 771
Gourley, Ira M., 931, 1493
Grant, B. D., 1820
Green, Sherril L., 1127
Greenfield, C., 137
Gregor, Thomas P., 59
Greiner, Ellis C., 1127
Grindem, C. B., 96
Grodinsky, Carolyn, 1623
Grove, T. K., 1858
Guntzelman, Joan, 1781
Guptill, Lynn, 1285
Guscetti, F., 783
Gustafsson, Borje K., 1002

Hacker, Dennis V., 1490
Hagemoser, W. A., 347
Hager, David A., 1479
Hahn, Kevin A., 1483, 1795
Haibel, George K., 326, 627
Hakala, Joyce E., 1276
Hall, Edward J., 91
Hall, Jeffrey A., 185
Halliwell, Richard E. W., 745
Hamir, Amir N., 1639
Hamlin, R. H., 110
Hand, Pamela J., 1049
Hanks, Donald R., 1605
Hanks, M. A., 1605
Hannah, Harold W., 54, 185, 418, 718, 1384, 1774
Hansen, Donald E., 731
Hardy, Joanne, 1631
Harper, Betty Jean, 467
Hartsfield, Sandee M., 420
Hathaway, S. C., 860
Hawk, D. A., 1609
Hawkins, Willard L., 1623
Hawthorne, Tracy Bennett, 323
Hayden, David W., 103
Hayes, Kathleen A., 1049
Hedlund, Cheryl S., 1513
Hedrick, Harold B., 1262
Hedstrom, Olaf R., 291, 731
Hegstad, Rebecca L., 103
Heidel, J. R., 316
Held, J. P., 1834
Hendrick, Mattie J., 1487
Hendricks, D. F., 1562
Henry, William B., Jr., 84
Herrick, John B., 222, 576, 872, 1224, 1587, 1937
Hesselink, J. W., 760
Heuschele, W. P., 1141
Heyer, Gail, 1639
Hietala, Sharon, 1962
Higgins, Robert, 301
Hildebrand, S. V., 1077
Hill, M. A., 881
Hillman, Robert, 1951
Hird, David W., 1590, 1791, 1945
Hoblet, K. H., 1956
Hoenig, Margarethe, 763
Hoffman, Andrew M., 392
Hoffmann, Walter E., 307
Hoffsis, Glen F., 329
Holler, L. D., 1609
Holmes, John C., 1945
Holzinger, Edwin A., 1200
Hopkins, M., 1562
Hornof, W. J., 925
Horstman, L., 2006
Hosgood, Giselle, 42, 135
Housley, Regina, 1139
Hovda, L. R., 319
Howard, Paul E., 1123
Howard, T. H., 1951
Hubbs, J. C., 1353
Hueston, W. D., 1956
Hurd, Cheryl, 1483

Iafe, James, 443
Iodence, Mark S., 901

Jacobs, Candace A., 855
Jacobs, Fred S., 679
Jacobs, Gilbert, 834
Jakob, Thomas P., 1635
Jamieson, Vivian E., 1116
Janke, Bruce H., 897
Jann, Henry W., 297
Jenny, B. F., 1562
Johnson, Darrell D., 897
Johnson, Deedra L., 1459, 1479
Johnson, LaRue W., 630
Johnson, Philip J., 449
Johnston, Gary R., 1053
Johnston, Janet K., 1836
Johnston, Shirley D., 103
Jones, Gary F., 597, 1236
Jones, R. D., 100
Jones, Robert L., 1617, 1844
Jordan, Helen E., 1090
Jordan, J. S., 316
Jortner, B. S., 570
Jortner, S. N., 570
Junge, Randall E., 131
Juranek, Dennis D., 277

Kallfelz, Francis A., 1815
Kaneene, J. B., 337
Karcher, Lance F., 1823
Kasari, Thomas R., 735
Kazacos, Evelyn, 1285
Keegan, Kevin G., 449
Keene, Bruce W., 1463
Keller, Evan T., 623
Kennedy, George A., 1827
Kennedy, Peter C., 1479
Ketring, Kerry L., 342
Kiesler, T. W., 1804
Kimberling, C. V., 605
King, John M., 455
Kiper, Mary Lou, 333
Kirby, Barbara M., 1123
Kirk, J. H., 1102
Kirkbride, C. A., 287
Kirker-Head, Carl A., 1635
Klausner, Jeffrey S., 103, 472, 1276
Knight, A. P., 605
Knox, K. E., 881
Koblik, Philip D., 925
Kociba, Gary J., 907, 1049
Komtebedde, J., 925
Koprowski, Hilary, 1614
Kornegay, Joe N., 1841
Kovacs, Kathleen J., 1496
Kram, Malcolm A., 724
Kramme, Patrick M., 106
Kroll, Robert A., 1053
Kruger, John M., 1053
Kuhns, Mary, 127
Kurpershoek, C., 931

Lackey, John E., 1352
Lamb, Christopher R., 917, 1474, 1497
Lantz, Gary C., 1291, 1795
Lappin, Mike R., 1116
Laratta, Louis J., 1490, 1985
Larivière, Serge, 301
Lassen, E. D., 291
Lawler, Dennis F., 1094
Lawrence, Elizabeth Atwood, 2018
Lee, John W., Jr., 1738
Leeth, Brian, 453
Legendre, Alfred M., 935
Leib, Michael S., 635
Leighty, J. C., 281
Lennon, Vanda A., 1276
Lerche, Nicholas W., 1654
Lewis, Diane T., 1513
Libal, Melissa C., 897
Liles, Michael A., 10
Linda, Stephen B., 1251
Lindsay, D. S., 1095
Ling, Gerald V., 1459, 1479
Lippincott, Shirley, 342
Lipsey, R. Jarold, 1262
Littell, Ramon C., 1251
Littman, Meryl P., 1487
Loefler, S., 865
Loew, Franklin M., 226
Lombard, Christophe, 834
Long, Glenis, R., 834, 1355
Lothrop, Clinton D., Jr., 77, 921
Love, N. E., 137
Luba, Norman K., 1623
Lulich, Jody P., 1053
Lunn, D. P., 319
Lusis, Peter, 680

MacAllister, Charles G., 1995
MacEwen, E. Gregory, 774
MacMillan, James G., 680
MacNamara, Brian, 443
Madigan, John E., 1962, 2001
Madison, John B., 121
Magnarelli, Louis A., 1064
Magnus, Robert, 56
Mahaffey, Mary B., 763
Major, M. D., 1820
Malik, Masoud A., 263
Manley, Paul A., 1123
Markovits, J. E., 83
Marks, M. Amanda, 1470
Marshall, Kent R., 1614
Martin, Benson B., 121
Martin, Terry, 1981
Martineau, Guy-Pierre, 301
Marty, G. D., 2001
Mastin, M. M., 520
Mathes, Lawrence E., 1049
Mathews, Karol, 2014
Matthiesen, David T., 1135
Matushek, K. J., 2014
Maxwell, Anna K., 743
Mayrose, V. B., 881
McAllister, R. A., 1965
McClay, Carolyn B., 1816
McCracken, Malcolm D., 935
McDonald, T. P., 921
McDonald, Steve, 1740
McEntee, M. C., 620
McGrew, David C., 1740
McGuirk, Sheila M., 319, 894
McLaughlin, Ronald M., 11
McMillan, Marjorie C., 477
Medearis, Ilsi, 1130
Medleau, Linda, 1470
Merritt, A. M., 1259
Mettler, John J., Jr., 406
Meyer, D. J., 323, 743
Meyers, Howard, 1388
Meyers, Stuart A., 1644
Middleton, Charles C., 1002, 1007, 1907
Miller, Christine L., 77
Miller, G. Y., 1956
Miller, Margaret, 771
Miller, Matthew W., 420, 728
Miller, R. Eric, 131
Miller, W. H., Jr., 757
Millichamp, Nicholas J., 1985
Mills, K. W., 1609
Mills, L. L., 1294
Mitchener, Kathy L., 1834
Mittal, Khyali R., 301
Mohammed, Hussni O., 865
Molitor, Thomas W., 877, 1967
Monfort, J. Daniel, 1069
Monke, Donald R., 1951
Monroe, William E., 635
Montavon, P. M., 783
Moore, Cecil P., 342
Moore, M., 1562

Moran, Alexandria, 1307
Morcom-Kasari, Ellen, 735
Morgan, Rhea V., 1985
Morgan, Susan D., 12
Moriello, Karen A., 743
Morris, E. L., 1147
Morris, Elisabeth A., 431
Morrison, Robert B., 877
Mosier, Derek, 1995
Muir, William W. III, 329
Murphy, Christopher J., 1490
Murphy, Michael, 1816
Murray, Michael J., 1623

Nagylaki, Thomas, 1910
Nash, Sharon, 1500
Nasisse, Mark P., 439, 1116
Neer, Charles A., 1049
Neiger, Regg D., 897
Nelson, Richard W., 1285
Nelson, Stuart, 771
Nickerson, S. C., 890
Niebauer, Gert W., 1487
Nielsen, N. O., 1141
Nixon, Alan J., 1859
Nyland, Thomas G., 1479

O'Brien, Michael A., 941
O'Callaghan, Michael W., 917
Ogilvie, Gregory K., 449
Olchowy, Timothy W. J., 1967
Olds, Durward, 726
Olsen, Richard G., 1049
Olson, Patricia N., 10
Omann, Mark, 639
Onet, G. Emil, 184, 1201
Orkin, Jack L., 1651
O'Rourke, Laurie G., 349
Osborne, Carl A., 1053
Ott, Randall S., 413
Owen, William J., 266

Pace, Lanny W., 1294
Packer, R. Allen, 574
Page, R. L., 620
Palmer, Charles W., 1590, 1945
Palmer, J. E., 1628
Panciera, Roger J., 1981
Papageorges, Marc, 939
Paradis, Manon, 1823
Paradis, Mary Rose, 2009
Pardo, Anthony D., 935
Parker, George, 425
Parnell, Pamela G., 763
Paul-Murphy, Joanne, 1490
Paulsen, Daniel, 1500
Pavletic, Michael M., 1003
Pechman, Robert D., 1513
Perman, Victor, 1816
Petersen, M., 600
Peterson, Mark G., 1985
Pham, C. K., 1804
Phillips, T. N., 300
Pickens, George, 522
Pickett, J. Phillip, 342
Pierce, Robert J., 1791
Pitts, Robert, 1614
Pollock, Roy V. H., 611
Polzin, David J., 1053
Pratt, D. L., 583, 1609
Preheim, Peter P., 1739
Prieur, W. D., 337
Pringle, John, 56
Pullen, M. M., 860

Qualls, Charles W., Jr., 1995

Rains, Jerry R., 297
Raisbeck, Merle F., 131
Randolph, John F., 77
Read, William K., 1644
Reef, Virginia B., 468, 1836
Reid, P., 1562
Reinemeyer, Craig R., 712, 1353
Rice, Lawrence E., 1981
Richardson, Dean W., 121
Riegger, Michael H., 1781
Riggs, Christi, 617
Riggs, Michael, 766
Rijnberk, Ad, 1799
Rings, D. Michael, 1647
Rippel, Ray, 307
Robbins, Mitchell A., 1786
Roberts, Tanya, 249
Robertson, James T., 453, 1631, 1641
Robinette, Jack, 766
Robison, Gayle A., 1739
Roby, Kate A. W., 465
Rohrbach, Barton W., 712, 1353, 1563
Rojko, Jennifer L., 627
Romatowski, Joseph, 1144
Rosenthal, Robert C., 774
Rosol, T., 1641
Ross, Linda A., 1497
Ross, Michael W., 121
Rossier, Yves, 1639
Roth, Lois, 570, 635
Roush, James K., 1123
Ruby, Annette L., 1459
Runnels, L. J., 881
Rupprecht, Charles E., 1614
Rush, John E., 1463

Sack, W. O., 1965
Sackman, Jill E., 1392
Salisbury, S. Kathleen, 1273, 1795
Sallee, Susan, 307
Salman, Mowafak D., 1244, 1617
Sande, Ronald, 939
Scarlett, Janet M., 611
Scavelli, Thomas D., 1135
Scheidt, A. B., 881
Schott, H. C. II, 1820
Schrader, Steven C., 71, 1135
Schreier, Alan B., 1064
Schultz, Kevin, 1910
Schwartz, Anthony, 1003, 1578
Schwartz, Cheryl, 833
Scott, Danny W., 1823
Scott, Edward, 639
Scott-Moncrieff, J. C., 1291
Sedgwick, Charles J., 352
Seeherman, Howard J., 431
Shaw, Dan, 771
Shearer, J. K., 865, 1097
Shelton, George, 1030
Sherman, David M., 459
Shin, S., 600
Shroff, Amy A., 224 (Insert)
Simmons, T. Robin, 455
Simpson, James R., 1251
Sischo, William M., 1590, 1945
Skirrow, Susan Z., 885
Skorup, Dianne E., 1135
Smith, David R., 833, 1738
Smith, Gail K., 59
Smith, J. M., 2001
Smith, John A., 605, 1244
Smith, Joni L., 1244
Smith, Joseph E., 749
Smith, Mark M., 931, 1493
Snyder, Joseph H., 1200
Snyder, Patti S., 1463
Snyder, Stanley P., 291, 731
Soares, Cecelia J., 734
Socha, Radomir, 1908
Solomon, Bruce, 1671
Solorzano, Robert, 771
Sonn, Robert J., 291, 731
Spalding, Marilyn G., 1127
Spaulding, Glen, 1006
Specht, T. E., 1307, 1859
Spurlock, Gareth H., 425
Spurlock, Shauna L., 425
Squire, K. R. E., 2006
St. Jean, Guy, 329
Stadler, Cynthia K., 749
Stampley, Anita, 113
Stauber, Erik, 766, 939
Steckel, Robert, 1006
Stevens, Jerry B., 1841
Stiff, M. E., 620
Stills, Harold F., Jr., 1069
Stolp, Ruurd, 1799
Stone, Elizabeth A., 1811
Strasser, Sheryl, 1671
Straw, B. E., 600
Sturman, John, 342
Styles, Martha E., 763
Sullivan, Nadine M., 1791
Sundberg, John P., 1007
Suter, P. F., 783
Suther, D., 1590
Sweeney, Corinne R., 393, 1639
Sweeney, Raymond W., 393
Swenson, Cheryl L., 1049
Szenci, Otto, 1239

Taboada, Joseph, 1513
Talens, L., 583
Taylor, Ian W., 835
Taylor, Delana S., 1981
Tesarowski, David B., 392
Thawley, David G., 877
Thompson, J. R., 347
Thomson, Christine E., 1841
Thornburg, Larry P., 131
Thrall, Mary Anna, 1244
Threlfall, W. R., 1641
Tizard, Ian, 1851
Toal, Robert L., 951, 1834
Tomkins, M. T., 96
Trammel, H. L., 100, 1768
Traub-Dargatz, Josie, 333, 1617
Trimm, Mark, 127
Tulleners, Eric P., 768, 1971
Turk, James, 771

Udtujan, R. M., 1095
Utterback, William W., 1590, 1945

Vaala, Wendy, 468
Vaillancourt, Jean-Pierre, 301
van den Tweel, J. G., 760
van Waes, Paul F. G. M., 1799
Veenstra, R. J., 1931
Viel, Laurent, 392
Voith, Victoria L., 944, 947
Voorhees, W. D. III, 1804
Voorhout, George, 1799

Walker, L. L., 316
Walker, R. D., 1102
Wallace, Roberta, 351
Walter, L. G., 620
Ward, Alton C. S., 902
Ward, G. E., 597
Ward, Lucy, 939
Ward, Michael V., 425
Ward, Steven, 1739
Ware, Doris A., 277
Watrous, Barbara, 639
Watkins, J. P., 1992
Watson, Alastair G., 1798
Watts, J. L., 890
Weber, J. A., 1084
Weber, U., 783
Weeks, Bradley R., 749
Weigler, Benjamin J., 1590, 1945
Weiss, Douglas J., 472, 1816
Welch, R. D., 1992
Welker, Frank H., 329
Wessale, J. L., 1804
White, Stephen D., 225, 1073, 1223
Whitley, R. David, 617
Widmer, William R., 1795
Wilkie, David A., 521, 1631, 1647, 1831
Wilson, D. J., 1102
Wilson, Marianna, 277
Wilson, W. David, 1130
Winkler, John K., 708
Wise, J. Karl, 348
Woelffer, Elmer A., 1776
Wolf, Alice M., 728
Wolf, E. Dan, 521
Woodbury, Amy H., 735
Woods, G. L., 1084
Wright, J. C., 1931

Yen, C-K, 925

Zamos, David, 1255
Zaugg, Jerry L., 1106
Zeman, David H., 897
Zicker, Steven C., 1130, 2001
Ziemer, Ellen L., 106
Zimmerman, Jeff J., 266
Zulty, Joseph C., 90.

PERSONALS

Adams, Catherine, 1929
Albers, Harold, 690
Albers, John, 1374
Allenstein, Leland, 199
Alsup, Eric, 1751
Anderson, David, 1765
Anderson, Robert, 1019
Armstrong, John, 27

Barnes, William, 206
Barrie, Kathleen, 690
Beard, Gary, 35
Beavers, Don, 1212
Blind, George, 1216
Bloomberg, Mark, 690
Brandt, James, 690
Brinker, Paul, 1761
Burch, Robert, 1219
Burns, Kenneth, 1376
Bustad, Leo, 1219

Chadduck, Michael, 1374
Childers, Henry, 1220
Clayton, John, 206
Cohen, Susan, 34
Coley, Stanley, 403
Conner, Gabel, 1219
Corbeil, Lynette, 207
Cowan, Garry, 1214
Crawford, Lester, 1220

Danielson, Robert, 1211
Davidson, Patrick, 1757
Davis, Lloyd, 1927
Detstine, Richard, 31
Detweiler, David, 31
Detwiler, Linda, 1921
Dickinson, Mary Ann, 1220
Dierauf, Leslie, 1920
Dieterlen, Paul, 1760
Dolensek, Emil, 1026
Domer, Robert, 1214
Dubey, J. P., 1921

Endrizzi, Michael, 1930
Essex, Myron, 1756
Evans, Randall, 1375

Fetrow, John, 197
Fingerlin, Eugene, 1212
Fletcher, Oscar, 1022
Fossett, Barry, 1375
Foy, Martin, 1216
Foy, Paul, 1374
Freeman, Arthur, 1923
Fuhrmann, Thomas, 199

Gage, E. Dean, 534
Galligan, David, 1921
George, L. Wade, 35
Glosser, James, 1211
Greene, Richard, 30

Harris, Delbert, 1372
Harris, Jerry, 1216
Hartsfield, Sandee, 1374
Haase, Steven, 1757
Hatch, Robert, 845
Heidelbaugh, Norman, 1923
Hilsenroth, Robert, 1027
Hoffsis, Glen, 197
Hueston, William, 1921
Hurvitz, Arthur, 1374

Ingmire, Cecil, 1214

Jacobson, Linda, 30
Johnson, Andrew, 198
Johnson, M. E., 1758
Johnson, Richard, 1215
Joiner, Steven, 690
Joslin, Janis, 687

Keith, Robert, 198
Kern, Thomas, 535
Kethler, Margretta, 1215, 1363
Kim, G. Kee, 198
Kimberling. Cleon, 1027
Koch, John, 1216
Koenig, Charles, 31
Kram, Malcolm, 1920

Labato, Maryanna, 1757
Laitinen, Douglas, 1212
Laurie, John, 31
Lawrence, Elizabeth, 402
Lebel, Jack, 1027
LeGeyt, Maxine, 1212
Leininger, Mary Beth, 1374
Lloyd, Herbert, 1013
Loula, Timothy, 1372
Low, Donald, 1756
Lutz, James, 690
Lyon, Kenneth, 845

Mackenzie, Charles, 1025
Maddox, Eugene, 1213
Magrane, William, 1757
Mann, James, 1930
Manning, John, 206
Marder, Myron, 30
Martin, Walter, Jr., 1757
McCarthy, John, 1764
McClelland, Robert, 1026
McKean, James, 1372
McLaughlin, Ronald, 692
Meerdink, Gavin, 29
Meerhoff, George, 31
Memmon, Mustaq, 1921
Morgan, Rhea, 1757
Morrow, David, 1374
Murnane, Thomas, 1219
Murray, Edward, 685

Nadler, Harold, 1026
Newman, Donald, 1211
Noah, Donald, 1216
Noyes, Jack, 1215

Olson, William, 848
Osthus, Wesley, 1214
Ostwald, Donald, 1027
Owen, Mabel, 27

Patton, Bill, 1363
Peavy, George, 534
Peterson, Mark, 34
Phillips, Robert W., 1207
Pliskin, Scott, 690
Prasse, Keith, 1765

Reed, Willie, 1025
Reindel, James, 1374
Rickard, Charles, 30
Riser, Wayne, 1757
Roberts, Kent, 844
Robertson, Edwin, 403
Rotondo, Kenneth, 31

Santa Cruz, Roque, 690
Schimoler, Louis, 31
Schwarm, Mark, 1214
Schwartz, Robert, 1216
Scott, Beverly, 845
Scott, Fredric, 1757
Seda, Leonard F., 1363
Sheridan, Harold, 1374
Simon, Barry, 35
Soifer, Fred, 1757
Solomon, Clell, 1214
Spaulding, Kathy, 403
Spears, Jerry, 690
Stark, Dennis, 692
Stevens, Alfred, 1761
Stevens, Owen, 1922
Strahm, Samuel, 1212
Stubbs, Evan, 1753

Taylor, Ian, 1219
Taylor, Richard, 1216
Thawley, David, 689
Thornburg, Roy, 1215
Thornton, Gus, 1757
Todd, Kenneth, Jr., 1923
Todd, Robbie, 1757
Turner, Ray, 1215
Twiehaus, Marvin, 207

Van Buskirk, Max, Jr., 27

White, James, 1374
Whitney, Robert, Jr., 1361
Wilcox, Bonnie, 1756
Williams, Donald, 34
Wohlgemuth, Kurt, 1211
Woolf, Walter, 690
Wright, David L., 1762
Wynn, W. Ned, 1761

DEATHS

Abendroth, Charlie Frank, 1766
Aldereguia, Salvador, 404
Allen, Eber H., 40
Anderson, Walter R., 1028

Banks, Roland W., Jr., 536
Barthel, Calvin W., 852
Barthelme, L. F., 40
Beaver, Floyd E., 852
Benson, Ronald Gene, 1028
Bowler, George E.,
Britten, Don E., 852
Brose, Cyrus P., 404

Cady, Duane L., 536
Caudle, Harold C., 40
Cleveland, Howard J., 692
Cox, Lawrence F., Sr., 1028
Crenshaw, Perry F., 692

Dolensek, Emil P., 1576
Durfee, George F., 1766

Ehlers, Daniel P., 1028

Farley, Herman, 1222
Finlay, John W., 404
Flickinger, Charles R., 404
Franklin, Ira I., 1576
Frye, Bob D., 1028

Getz, Austin T., 404
Gibbons, Richard Michael, 1766
Gillespie, Robert L., 208
Green, William W., 1028

Hartle, George G., 692
Henke, Robert P.,
Horstman, Carl H., 1766
Hultgren, Bruce Dean, 1766

Jarvis, Alfred H., 1576
Jepson, Stanley G., 536

Kearns, Richard J., 852, 1222
King, Stanley, 404
Kitchen, Hyram, 852
Knight, Delvin R., 1930
Kowalk, Arthur J., 404
Kutish, Edward S., 1576

Lamb, Charles A., 536
Lancaster, Harry R., 852
Lott, George Clyde, 1766
Luquette, George Francis, 852

Marshall, Barry J., 1028
Matchett, Arnett, 852
Mather, George W., 1766
McChesney, Albert E., 1028
McClung, Alan Wayne, 692
McCoy, James A., 208
McDonald, Cecil F., 852
Meisinger, Fred H., 536
Mengle, Holmes R., Jr., 40
Mikles, Howard F., 1766
Musgrove, Monte Rodell, 1028

Nangeroni, Louis, 404
Netherton, Rex Benton, 40
Nettles, William D., 1222
Nordell, Howard L., 1766
Parker, Richard L., 404
Pate, Charles H., Jr., 1222
Pavillard, Dean B., 1028
Payne, Marjorie J., 1222
Pittman, Arthur B., 1376
Powell, John D., 536

Rheudasil, Jerry Allen, 852
Rihm, Michael Baker, 530
Ritthaler, Kenneth W., 1576
Roach, Laverne M., 208
Rushmore, Rowland W., 1376

Sandullo, Nicola, 536
Sass, Bernard, 40
Schulz, Carl W.,
Shaw, W. Sumner, 1766
Singh, Diwan, 208
Swain, Lee C., 1766

Tennille, Newton Bridgewater, 1028
Troutman, Walter A., 852
Trussell, William E., 40

Walton, Charles H., 404
Williams, Joe T., 1766
Winkler, Donald W., 1766
Wiseman, Edwin S., 1376
Wolff, Michael J., 692
Wolfman, Barbara Ann, 1930

Index to Subjects

A

ABORTION
- Toxoplasmosis and other causes of abortion in sheep from north central United States, 287
- Serologic and histologic diagnosis of toxoplasmic abortions in sheep in Oregon, 291
- Efficacy of a vaccine to prevent *Chlamydia*- or *Campylobacter*-induced abortions in ewes, 731

ABSCESS
- Hypertrophic osteopathy in a dog with a chronic lung abscess, 760
- Differentiation between intra-abdominal neoplasms and abscesses in horses, using clinical and laboratory data: 40 cases (1973-1988), 1130
- Peritracheal abscess associated with tracheal collapse and bilateral laryngeal paralysis in a dog, 1273
- Clinical, pathologic, and microbiologic findings of foot abscess in neonatal pigs, 1791

Acetaminophen—Effects of propylene glycol-containing diets on acetaminophen-induced methemoglobinemia in cats, 1816

Acidosis—Decreased colostral immunoglobulin absorption in calves with postnatal respiratory acidosis, 1239

Actinobacillus spp
- Seroprevalence of *Actinobacillus (Haemophilus) pleuropneumoniae* serotype-1 infection in swine herds in Quebec, 301
- Antibody production and tissue irritation in swine vaccinated with *Actinobacillus* bacterins containing various adjuvants, 600

Adrenal Gland—Assessment of survey radiography and comparison with x-ray computed tomography for detection of hyperfunctioning adrenocortical tumors in dogs, 1799

African Horse Sickness—African horse sickness: A continuing menace, 2019

Alkalosis—Adverse effect of orally administered magnesium hydroxide on serum magnesium concentration and systemic acid-base balance in adult cattle, 735

Amyloidosis—Systemic amyloidosis in a mare, 323

Anaplasma spp—Seasonality of natural transmission of bovine anaplasmosis under desert mountain range conditions, 1106

Anatomy—Anatomy of the dorsoscapular ligament of horses, 446

ANEMIA
- Cold agglutinins in cats with haemobartonellosis, 907
- Macrohematuria and life-threatening anemia attributable to subepithelial vascular ectasia of the urinary bladder in a dog, 1487

Anemia, Aplastic—Drug-associated aplastic anemia in dogs: 8 cases (1984-1988), 472

Anesthesia, General—Contracture test and histologic and histochemical analyses of muscle biopsy specimens from horses with exertional rhabdomyolysis, 1077

Animal Bites—Prevention and amelioration of stress and consequences of interaction between children and dogs, 1781

ANIMAL WELFARE
- Do animal rights advocates have special propensity for compassion?, 11, 12
- More on "Speciesism is the natural order," 680
- A call for common understanding of animal welfare, animal rights, and animal well-being, 832
- Dooming animals to no life at all?, 833
- Proposed legislation on use of animals in Pennsylvania, 1200
- The politics of formula-fed veal calf production, 1578
- More on "Dooming animals to no life at all?", 1738

Applications for Membership, 151, 356, 481, 645, 797, 960, 1163, 1315, 1519, 1700, 1867, 2031

Artificial Insemination—Surveillance for persistent bovine viral diarrhea virus infection in four artificial insemination centers, 1951

Atrial Fibrillation—Atrial fibrillation associated with neostigmine administration in three cows, 329

ATROPHIC RHINITIS
- Relationship of growth performance to pneumonia and atrophic rhinitis detected in pigs at slaughter, 881
- Measurement of conchal atrophy and pneumonic lesions and their association with growth rate in commingled feeder pigs, 1262

Autoantibodies—Prevalence of antithyroglobulin antibodies detected by enzyme-linked immunosorbent assay of canine serum, 745

AVIAN SPECIES
- Adverse effects of gentamicin in scarlet macaws and galahs, 934
- Polyostotic hyperostosis associated with oviductal tumor in a cockatiel, 939
- Eyelid malformation in four cockatiels, 1490

AVMA ACTIVITIES SUMMARY, 1989
- Membership, 537
- Public Information, 537
- Governmental Relations, 541
- AVMA Foundation, 545
- AVMA Group Health and Life Insurance, 546
- AVMA Professional Liability Insurance, 548
- Workers' Compensation Insurance, 549
- Council on Education, 549
- Student AVMA, 550
- Graduates of foreign colleges, 551
- National licensing examinations, 552
- Veterinary technicians, 552
- Committee on Impaired Veterinarians, 553
- Council on Biologic and Therapeutic Agents, 554
- Veterinary specialty organizations, 555
- Council on Research, 556
- Animal Welfare, 557
- Committee on the Human-Animal Bond, 557
- Career Development Center, 557
- Council on Veterinary Service, 558
- Pet Food Advisory Committee, 558
- Marketing Services, 559
- Student loans, 559
- Income and indebtedness of graduating seniors, 559
- Biennial economic survey, 559

Council on Public Health and Regulatory Veterinary Medicine, 560
AVMA Convention in Orlando, 561
Future AVMA Annual Meetings, 563
Publications, 563

AVMA Animal Welfare Committee
Animal Welfare Committee looks at animal rights, 17
Nominees chosen for new Animal Welfare award, 1924

AVMA at Work
National Pet Week celebrates decade of dedication, 15
Animal Welfare Committee looks at animal rights, 17
Committee on Human-Animal Bond meets, 18
Board takes actions at fall meeting, 187
Animal welfare concerns addressed, 190
Brucellosis and foreign animal disease positions issued, 191
Cats should be vaccinated for rabies, 191
AVMA offers new membership services, 192
Enter posters for National Pet Week, 192
Board looks at animal research, 192
Single registration fee entitles AVMA conventioners to attend seminars, 193
Council on Education reviews findings of hearing panel, 194
PR and management officials gather in Washington, 399
JAVMA stays in winner's circle, 399
Educational symposia highlighted, 400
New animal research brochure available from AVMA, 400
AVMA encourages mandatory vaccinations for cats, 528
AVMA submits extra-label drug use proposal to FDA, 528
Foundation receives donation, 530
Flea theory behind rabies transmission unfounded, 530
AVMA Animal Welfare Award nominations, 530
AVMA, medical community condemn ALF break-in, 841
Membership benefits unveiled, 1016
AVMA negotiates special benefit package for relocating members and employees, 1016
AVMA enters into relationship with full-service credit card processor, 1017
AVMA conducts 1990 economic survey, 1018
Guidelines being developed for surgery on animals used in research and teaching, 1203
National Board testing dates changed for '91, 1203
Publications Committee approves display ad rules, 1204
PR Council recommends upgrade of AVMA Award, 1205
Seda elected to Board, 1363
Scheidy Award offered for World Congress speakers, 1363
Kethler and Patton vie for Board seat, 1363
Council plans food safety workshop, 1363
Council invites research grant proposals, 1364
100 percent participation marks 1990 AVMA Heartworm Awareness Campaign, 1366
Council recommends alliance with poison network, 1568
Animal poison hotline, 1568
Mastitis Committee develops quality assurance program, 1570
Proposed Amendments to AVMA Bylaws, 1571
Council tackles problems of importation and eradication, 1747
In the interim . . ., 1747
Council supports foreign animal disease resolutions, 1748
Committee on Human-Animal Bond meets, 1749
Interested in writing?, 1750
Alsup joins AVMA staff as assistant editor, 1751
Please note *(Business Sessions)*, 1751
Strategic planning retreat kicks off Board meeting, 1913
Executive Board meets in April, 1915
House Advisory Committee reviews proposed amendments, 1915
Resolutions proposed in 1990, 1919
Liaisons created or renewed, 1922
Appointments announced by Board, 1924
Alumni reception, 1924
Nominees chosen for new Animal Welfare award, 1924

AVMA Committee on the Human-Animal Bond
Committee on Human-Animal Bond meets, 18
Committee on Human-Animal Bond meets, 1749

AVMA Council on Biologic and Therapeutic Agents
Council acts on biologics issues, 1567

AVMA Council on Education
Council on Education reviews findings of hearing panel, 194

AVMA Council on Public Health and Regulatory Veterinary Medicine
AVMA guide to hazard communication, 224 (Insert)
Council tackles problems of importation and eradication, 1747
Animal importation problems, 1747
Bovine tuberculosis, 1747
Pseudorabies eradication, 1747
Foot-and-mouth disease, 1747
Council supports foreign animal disease resolutions, 1748
African horse sickness, 1750
NRHA liaison, 1750
"Zoonosis Update" monograph, 1750
Wild animals as pets, 1750
Food safety workshop, 1750
AVMA Public Service Award, 1750
Certificates of appreciation, 1750
Officers, 1750

AVMA Council on Public Relations
PR Council recommends upgrade of AVMA Award, 1205
Education campaign proposed, 1205
Health tips from Miss America, 1205
Video available soon, 1205
Marketing clinic bookings, 1205
Cat Health Month, 1205
USA Today advertorial, 1205
Animal Welfare representative, 1205
New officers, 1205

AVMA Council on Research
Council plans food safety workshop, 1363
Animal welfare/animal rights, 1364
Research priorities, 1364
Scientific program, 1364
Awards, 1364
Council invites research grant proposals, 1364

AVMA Council on Veterinary Service
AVMA guide to hazard communication, 224 (Insert)
Council recommends alliance with poison network, 1568
Internal Revenue Service, 1568
Occupational health guidelines, 1568
Stress and burnout, 1568

AVMA Executive Board
Board takes actions at fall meetings, 187
Biotechnology, 188
Animal health insurance, 188
Brokerage units for AVMA insurance trusts, 188
Milk quality checklist, 188
Peer review procedure, 188
Pesticide enforcement, 188
Seafood inspection, 188
Selenium tolerance levels, 188
Placement Service fee, 189
Hazard communications guide, 189
Advertisers to be recognized, 189
Canadian film library, 189
Allied groups incorporate, 189
Student essay competition, 189
WVA dues, 189
Affiliate members, 189
New staff positions, 189
Council and liaison matters, 190
AVMA switchboard, 190
Animal welfare concerns addressed, 190
Brucellosis and foreign animal disease positions issued, 191
Cats should be vaccinated for rabies, 191
AVMA offers new membership services, 192
Board looks at animal research, 192
Single registration fee entitles AVMA conventioners to attend seminars, 193

Strategic planning retreat kicks off Board meeting, 1913
Executive Board meets in April, 1915
Practice act revision, 1915
Ethical concerns, 1915
Wild animals as pets, 1916
APHIS veterinary budget, 1916
Research priorities, 1916
Biologic and therapeutic agents, 1916
Public health and regulatory matters, 1916
Food safety workshop, 1917
African horse sickness symposium, 1917
FDA commissioner post, 1917
Convention matters, 1917
AVMA Congressional fellow, 1917
Animal welfare/animal rights, 1917
NAPINet and FARAD support, 1917
Public relations, 1917
Long-distance phone discount, 1922
AVMA policy-making bodies, 1922
Treasurer reelected, 1922
Bylaw proposals, 1922
Zoonosis update monograph, 1922
Delta Society conference, 1922
Liaisons created or renewed, 1922
South African congress, 1923
Insurance matters, 1923
Freeman commemorative fund, 1923
Membership petitions, 1923
Appointments announced by Board, 1924

AVMA House Advisory Committee
House Advisory Committee reviews proposed amendments, 1915

AVMA Mastitis Committee
Mastitis Committee develops quality assurance program, 1570

Awards and Honors
Producer publication pays tribute to veterinarian, 34
VMA of NYC recognizes two, 34
AAHA presents regional awards, 35
Military student recognized, 35
Eight alumni honored at Illinois, 206
Prize awarded for data program paper, 206
Veterinarian commended by Senate, 1219
Alumni honored at Washington State, 1219
Alumni honored at Auburn, 1220
Clinical dietitian award initiated, 1220
Harvard microbiologist receives first Lasker professorship, 1756
Veterinarian wins writing contest, 1756
Low receives service award, 1756
Dubey receives USDA certificate of merit, 1921

B

Bacterins—Antibody production and tissue irritation in swine vaccinated with *Actinobacillus* bacterins containing various adjuvants, 600

Bacteriology
Bacterial flora of the vagina and uterus of healthy cats, 902
Comparison of two sample collection methods for quantitative bacteriologic culture of canine prostatic fluid, 1479
Clinical, pathologic, and microbiologic findings of foot abscess in neonatal pigs, 1791

Behavior
Behavioral problems in old dogs: 26 cases (1984-1987), 944
Cat aggression redirected to people: 14 cases (1981-1987), 947
Prevention and amelioration of stress and consequences of interaction between children and dogs, 1781
Benzamides—Fenvalerate/*N,N*-diethyl-*m*-toluamide (Deet) toxicosis in two cats, 100
Biologics—New veterinary biological products, 1122, 1650
Blesboks—Acute monensin toxicosis in Stone sheep *(Ovis dalli stonei)*, blesbok *(Damaliscus dorcus phillipsi)*, and a Bactrian camel *(Camelus bactrianus)*, 131
Biochemistry—Evaluation of an automated tabletop blood biochemical analyzer for the veterinary clinical pathology laboratory, 307
Blood Groups—Donation and typing of blood, 13

Bone
Preoperative measurement of canine primary bone tumors, using radiography and bone scintigraphy, 1474
Single-phase methylene diphosphate bone scintigraphy in the diagnostic evaluation of dogs with osteosarcoma, 1483

Book Reviews
Abnormal Morphology of Bovine Spermatozoa (A. D. Barth and R. J. Oko), 138
Anatomy of Domestic Animals: Systemic and Regional Approach (C. Pasquini and T. Spurgeon), 1798
Animal Liberators: Research and Mortality (S. Sperling), 2018
Animal Research and Ethical Conflict. An Analysis of the Scientific Literature: 1966-1986 (M. T. Phillips and J. A. Sechzer), 1287
An Atlas of Cardiovascular Pathology (S-K. Liu, et al), 1496
Clinicopathologic Principles for Veterinary Medicine (W. F. Robinson and C. R. R. Huxtable), 781
Current Techniques in Small Animal Surgery (M. J. Bojrab), 759
Diagnostic Cytology of the Dog and Cat (R. L. Cowell and R. D. Tyler), 349
Guide to the Dissection of Domestic Ruminants (R. E. Habel), 120
Housing, Care and Psychological Wellbeing of Captive and Laboratory Primates (E. F. Segal), 83
Medicine and Surgery of South American Camelids: Llama, Alpaca, Vicuma, Guanaco (M. E. Fowler), 352
Mineral Levels in Animal Health: Diagnostic Data (R. Puls), 1815
Nutrition of the Dog and Cat (I. H. Burger and J. P.W. Rivers), 626
Perspectives on Animal Research (S. R. Kaufman and B. Todd), 102
Practical Canine Dermatology (L. J. Ackerman), 1083
Practical Equine Dermatology (L. J. Ackerman), 1284
Practical Feline Dermatology (L. J. Ackerman), 1492
Principal Parasites of Domestic Animals in the United States: Biological and Diagnostic Information (V. Ivens, D. L. Mark, et al), 126
Problems in Equine Medicine (C. M. Brown), 300
Project BREED (Breed Rescue Efforts and Education) Directory (S. Weber), 467
Review of Veterinary Microbiology (E. L. Biberstein and Y. C. Zee), 1844
Small Animal Oral Medicine and Surgery (M. J. Bojrab and M. Tholen), 1858
Small Animal Therapeutics (R. J. Martin), 901
To Care Enough: Intervention and Chemically Dependent Colleagues (L. R. Crosby and L. C. Bissell), 734
Veterinary Pediatrics: Dogs and Cats from Birth to Six Months (J. D. Hoskins), 1094
Veterinary Ethics (J. Tannenbaum), 1469
Books received but not reviewed, 76, 328, 634, 1109, 1258, 1658, 1955

Borrelia spp
Persistence of antibodies to *Borrelia burgdorferi* in dogs of New York and Connecticut, 1064
Serologic survey for *Borrelia burgdorferi* antibody in horses referred to a mid-Atlantic veterinary teaching hospital, 1255

Bovine Species
Atrial fibrillation in a cow with meningitis, 56
Effect of vaccination with a pentavalent leptospiral vaccine containing *Leptospira interrogans* serovar *hardjo* type hardjo-bovis on type hardjo-bovis infection of cattle, 90
Induction of *Escherichia coli* mastitis in cows fed selenium-deficient or selenium-supplemented diets, 130
Status of toxoplasmosis in cattle in the United States, 257
Atrial fibrillation associated with neostigmine administration in three cows, 329
Muscular hypertrophy in beef cattle: déjà vu, 413
Phagocytosis, bactericidal activity, and oxidative metabolism of milk neutrophils from dairy cows fed selenium-supplemented and selenium-deficient diets, 478

Clinical and immunologic response of cattle to administration of a vaccine containing modified-live bovine respiratory syncytial virus, 583
Thrombocytopenia and hemorrhages in veal calves infected with bovine viral diarrhea virus, 590
Evaluation of a scheme for predicting the gram-staining reaction of the organisms causing bovine mastitis, 597
Subchondral cyst in the middle phalanx of a bull, 639
Viewpoints on dairy herd fertility, 726
Correction: 1275
Adverse effect of orally administered magnesium hydroxide on serum magnesium concentration and systemic acid-base balance in adult cattle, 735
Topically applied benzathine cloxacillin for the treatment of infectious bovine keratoconjunctivitis, 762
Third-degree perineal lacerations and rectovestibular fistulas in cattle: 20 cases (1981-1988), 768
Diagnosis of nitrate toxicosis in cattle, using biological fluids and a rapid ion chromatographic method, 773
Financial comparison of three testing strategies for detection of estrus in dairy cattle, 865
Induced *Tritrichomonas foetus* infection in beef heifers, 885
In vitro and in vivo evaluation of a 0.5% chlorhexidine gluconate teat dip, 890
Bradycardia in cattle deprived of food, 894
Attaching and effacing *Escherichia coli* infection as a cause of diarrhea in young calves, 897
Influence of tolazoline on caudal epidural administration of xylazine in cattle, 1052
Potential for the spread of *Fasciola hepatica* in cattle in Oklahoma, 1090
Condemnation of beef because of *Sarcocystis hirsuta* infection, 1095
Mycoplasmal mastitis in a dairy herd, 1097
Serratia marcescens mastitis in a dairy herd, 1102
Seasonality of natural transmission of bovine anaplasmosis under desert mountain range conditions, 1106
Herd benefit-to-cost ratio and effects of a bovine mastitis control program that includes blitz treatment of *Streptococcus agalactiae*, 1230
Decreased colostral immunoglobulin absorption in calves with postnatal respiratory acidosis, 1239
Eperythrozoon wenyonii infection in dairy cattle, 1244
Use of an enzyme-linked immunosorbent assay to estimate prevalence of paratuberculosis in cattle of Florida, 1251
Caudal vena caval thrombosis in a cow, 1294
Safety and efficacy of two sustained-release intrareticular selenium supplements and the associated placental and colostral transfer of selenium in beef cattle, 1489
Prevalence of trichomoniasis among California beef herds, 1590
Circumocular pigmentation and incidence of ocular squamous cell tumors in *Bos taurus* and *Bos indicus* × *Bos taurus* cattle, 1605
Reproductive consequences of deficiency of uridine monophosphate synthase in Holstein cattle, 1634
Squamous cell carcinoma of the vulva in a cow, 1644
Repair of an anomalous nasolacrimal duct in a bull by use of conjunctivorhinostomy, 1647
Veterinary and nonveterinary costs of disease in 29 California dairies participating in the National Health Monitoring System from 1988 to 1989, 1945
Surveillance for persistent bovine viral diarrhea virus infection in four artificial insemination centers, 1951
Mastitis control services and utilization of milk somatic cell count data by veterinarians in Ohio, 1956
Effects of marketing stress on fecal excretion of *Salmonella* spp in feeder calves, 1964
Full-length diaphyseal sequestrum as a consequence of segmental transverse fractures of the large metatarsal bone in a calf, 2006
Effect of dietary crude-protein type on fertilization and embryo quality in dairy cattle, 2008

Bovine Viral Diarrhea Virus
Thrombocytopenia and hemorrhages in veal calves infected with bovine viral diarrhea virus, 590
Surveillance for persistent bovine viral diarrhea virus infection in four artificial insemination centers, 1951
Bradycardia—Bradycardia in cattle deprived of food, 894
Brain—Gemistocytic astrocytoma in a one-month-old llama, 2009

Breaking Story
Rare form of botulism in horses reported, 529
Correction: 849
Dean Kitchen fatally shot, 837

Brucella spp
Brucella ovis excretion in semen of seronegative, clinically normal breeding rams, 313
Antimicrobial therapy for rams with *Brucella ovis* infection of the urogenital tract, 605
Brucella abortus infection in 14 farm dogs, 911
Brucella ovis epizootic in virgin ram lambs, 1120
Brucellosis—Suggestion for completing brucellosis eradication program, 1739
Butorphanol—Pharmacologic features of butorphanol in dogs and cats, 135

C

Calcitonin—Salmon calcitonin as adjunct treatment for vitamin D toxicosis in a dog, 1269
Calcium—Hypercalcemia secondary to cholecalciferol rodenticide toxicosis in two dogs, 1265

Camels
Acute monensin toxicosis in Stone sheep *(Ovis dalli stonei)*, blesbok *(Damaliscus dorcus phillipsi)*, and a Bactrian camel *(Camelus bactrianus)*, 131
Acute toxoplasmosis in a camel, 347
Campylobacter spp—Efficacies of erythromycin and chloramphenicol in extinguishing fecal shedding of *Campylobacter jejuni* in dogs, 1069
Campylobacteriosis—Efficacy of a vaccine to prevent *Chlamydia*- or *Campylobacter*-induced abortions in ewes, 731

Canine Species
New concepts of coxofemoral joint stability and development of a clinical stress-radiographic method for quantitating hip joint laxity in the dog, 59
Use of flexible intramedullary rods for fixation of femoral fractures in eight dogs, 71
Delayed growth in two German Shepherd Dog littermates with normal serum concentrations of growth hormone, thyroxine, and cortisol, 77
Total ear canal ablation combining bulla osteotomy and curettage in dogs with chronic otitis externa and media, 84
Enhanced intestinal permeability to ^{51}Cr-labeled EDTA in dogs with small intestinal disease, 91
Acute nonlymphocytic leukemia in a dog, 110
Calcinosis circumscripta of the metacarpal pad in a dog, 113
Pulmonic stenosis caused by single coronary artery in dogs: Four cases (1965-1984), 115
Avulsion of the urinary bladder in a dog, 137
Evaluation of an automated tabletop blood biochemical analyzer for the veterinary clinical pathology laboratory, 307
Clinical evaluation of intertrochanteric osteotomy for treatment of dogs with early-stage hip dysplasia: 37 cases (1980-1987), 337
Drug-associated aplastic anemia in dogs: 8 cases (1984-1988), 472
Osteolysis associated with multiple myeloma in a dog, 477
Intraocular silicone prostheses in a dog and a horse with corneal lacerations, 617
Transient glomerulonephropathy associated with primary erythrocytosis in a dog, 620
High serum trypsin-like immunoreactivity secondary to pancreatitis in a dog with exocrine pancreatic insufficiency, 623
Comparisons between endoscopic and histologic evaluation of the gastrointestinal tract in dogs and cats: 75 cases (1984-1987), 635
Ear trimming in dogs, 679
First-degree and Mobitz type I-A second-degree A-V block with uniform ventricular escape beats in a dog, 728
Effect of otic medications containing glucocorticoids on liver

function test results in healthy dogs, 743
Prevalence of antithyroglobulin antibodies detected by enzyme-linked immunosorbent assay of canine serum, 745
Effect of dietary iron content on hematologic and other measures of iron adequacy in dogs, 749
Long-term survival after surgical excision of a schwannoma of the sixth cervical spinal nerve in a dog, 754
Cutaneous mucinous vesiculation in a dog with hypothyroidism, 757
Hypertrophic osteopathy in a dog with a chronic lung abscess, 760
Coliform septicemia and pulmonary disease associated with canine parvoviral enteritis: 88 cases (1987-1988), 771
Treatment of lymphoma in dogs, 774
Tear in dura mater between T13 and L1 in a dog, 783
Brucella abortus infection in 14 farm dogs, 911
Bone scintigraphy in the initial evaluation of dogs with primary bone tumors, 917
Plasma von Willebrand factor concentration and thyroid function in dogs, 921
Use of transcolonic ^{99m}technetium-pertechnetate as a screening test for portosystemic shunts in dogs, 925
Management of tracheal stenosis in a dog, 931
Primary jejunal osteosarcoma associated with a surgical sponge in a dog, 935
Behavioral problems in old dogs: 26 cases (1984-1987), 944
Ultrasonographic appearance of primary and metastatic canine hepatic tumors: a review of 48 cases, 950
Retrobulbar mass in a dog, 951
Persistence of antibodies to *Borrelia burgdorferi* in dogs of New York and Connecticut, 1064
Efficacies of erythromycin and chloramphenicol in extinguishing fecal shedding of *Campylobacter jejuni* in dogs, 1069
Naltrexone for treatment of acral lick dermatitis in dogs, 1073
Chronic osteomyelitis associated with orthopedic implants and cranial cruciate repair in three dogs, 1123
Effects of age, sex, and body size on serum concentrations of thyroid and adrenocortical hormones in dogs, 1126
Partial rupture of the cranial cruciate ligament of the stifle in dogs: 25 cases (1982-1988), 1135
Staphylococcal folliculitis in a dog, 1223
Hypercalcemia secondary to cholecalciferol rodenticide toxicosis in two dogs, 1265
Salmon calcitonin as adjunct treatment for vitamin D toxicosis in a dog, 1269
Peritracheal abscess associated with tracheal collapse and bilateral laryngeal paralysis in a dog, 1273
Clinical remission following plasmapheresis and corticosteroid treatment in a dog with acquired myasthenia gravis, 1276
Suspected familial renal disease in Chow Chows, 1279
Evaluation of a commercial staphylococcal bacterin for management of idiopathic recurrent superficial pyoderma in dogs, 1290
Sinus arrest and idioventricular rhythm in a dog with an elongated soft palate, 1392
Preoperative measurement of canine primary bone tumors, using radiography and bone scintigraphy, 1474
Comparison of two sample collection methods for quantitative bacteriologic culture of canine prostatic fluid, 1479
Single-phase methylene diphosphate bone scintigraphy in the diagnostic evaluation of dogs with osteosarcoma, 1483
Macrohematuria and life-threatening anemia attributable to subepithelial vascular ectasia of the urinary bladder in a dog, 1487
Preputial reconstruction in a dog, 1493
Reduction of hydronephrosis and hydroureter associated with ectopic ureters in two dogs after ureterovesical anastomosis, 1497
Protein requirements of growing pups fed practical dry-type diets containing mixed-protein sources, 1511
Esophageal diverticulum in a dog, 1513
Duration of etomidate-induced adrenocortical suppression during surgery in dogs, 1608
Prevention and amelioration of stress and consequences of interaction between children and dogs, 1781
Comparison of survey radiography with ultrasonography and x-ray computed tomography for clinical staging of subcutaneous neoplasms in dogs, 1795
Assessment of survey radiography and comparison with x-ray computed tomography for detection of hyperfunctioning adrenocortical tumors in dogs, 1799
Impedance cardiography by use of a spot-electrode array to track changes in cardiac output in anesthetized dogs, 1804
Surgically induced tumor seeding in eight dogs and two cats, 1811
Aortic thromboembolism as a complication of gastric dilatation/volvulus in a dog, 1829
Use of ultrasonographic and nuclear imaging to diagnose scrotal hernia in a dog, 1834
Analysis of cerebrospinal fluid from the cerebellomedullary and lumbar cisterns of dogs with focal neurologic disease: 145 cases (1985-1987), 1841
Distribution of material injected intramuscularly in dogs, 1998
Results of ligation of patent ductus arteriosus in dogs: 201 cases (1969-1988), 2011
Generalized motor seizures after portosystemic shunt ligation in dogs: Five cases (1981-1988), 2014

CAPRINE SPECIES
Status of toxoplasmosis in sheep and goats in the United States, 259
Prevalence of *Toxoplasma gondii* antibodies in dairy goats from 1982 to 1984, 295
Intestinal adenocarcinoma in a goat, 323
Vaginal leiomyofibromatosis and goiter in a goat, 627

CARDIOLOGY
Pulmonic stenosis caused by single coronary artery in dogs: Four cases (1965-1984), 115
Impedance cardiography by use of a spot-electrode array to track changes in cardiac output in anesthetized dogs, 1804
Cardiovascular System—Use of transcolonic ^{99m}technetium-pertechnetate as a screening test for portosystemic shunts in dogs, 925

CARE AND USE OF ANIMALS
Probing four views of animal use, 1368
Laboratory break-ins threaten animal research, 1574

CAREER PATHWAYS IN VETERINARY MEDICINE
The Congressional Science Fellowship: A first, 721
Views from the 1989-1990 Congressional Fellow, 724
Agriculture Policy Analyst: A niche in public service, 858
Back to school again: First step toward a new career, 1236
Catheters—Long-term jugular vein catheterization in horses, 425

CENTRAL NERVOUS SYSTEM
Myelitis in a cat infected with *Toxoplasma gondii* and feline immunodeficiency virus, 316
Halicephalobus (Micronema) deletrix infection in two half-sibling foals, 1127
Cerebrospinal Fluid—Analysis of cerebrospinal fluid from the cerebellomedullary and lumbar cisterns of dogs with focal neurologic disease: 145 cases (1985-1987), 1841
Certification Examinations, 147, 358, 486, 646, 792, 958, 1162, 1314, 1518, 1699, 1870, 2033
Chimpanzees—Sialolithiasis in two chimpanzees, 1651
Chlamydiosis—Efficacy of a vaccine to prevent *Chlamydia-* or *Campylobacter*-induced abortions in ewes, 731
Chloramphenicol—Efficacies of erythromycin and chloramphenicol in extinguishing fecal shedding of *Campylobacter jejuni* in dogs, 1069
Chlorhexidine—In vitro and in vivo evaluation of a 0.5% chlorhexidine gluconate teat dip, 890
Cholecalciferol—Hypercalcemia secondary to cholecalciferol rodenticide toxicosis in two dogs, 1265
Cholelithiasis—Ultrasonographic findings in horses with cholelithiasis: Eight cases (1985-1987), 1836
Cimetidine—Cimetidine for treatment of melanomas in three horses, 449
Letter: 1201
Clinical Pathology—Effect of dietary iron content on hematologic and other measures of iron adequacy in dogs, 749

COAST TO COAST
In New York, 30
In Pennsylvania, 31

Florida celebrates 60th convention, 690
Eastern States Conference held, 844
Maryland's care committee meets its first challenge, 845
In Arizona, 845
Veterinary exhibit tours museums, 846
New York celebrates centennial, 1026
In Colorado, 1027
Western Veterinary Conference held, 1211
In New Mexico, 1211
In Oklahoma, 1212
In Connecticut, 1212
Virginia VMA advertises rabies warning on billboards, 1213
Georgia VMA installs president, 1213
In Kansas, 1214
In Illinois, 1214
In Idaho, 1215
In Ohio, 1215
In Missouri, 1216
In Nebraska, 1374
In Michigan, 1374
In Maine, 1375
Dental prophylaxis regulation wins approval, 1760
In Indiana, 1760
In Louisiana, 1761
Cincinnati VMA elects president, 1761
In West Virginia, 1930
Coccidioidomycosis—Disseminated coccidioidomycosis in a horse with osteomyelitis, 106
Colitis—Treatment of right dorsal ulcerative colitis in a horse, 455
Colostrum—Decreased colostral immunoglobulin absorption in calves with postnatal respiratory acidosis, 1239
Coming Meetings, 145, 354, 479, 641, 785, 954, 1155, 1309, 1515, 1694, 1861, 2025

CONCERNS FACING THE PROFESSION
Kansas coalition presents impaired professionals conference, 847
Canine DNA fingerprinting: can it identify breeds?, 1357
Curbing vicious dogs: breeds hounded by proposed ordinances, 1358

CONGENITAL ABNORMALITIES
Pulmonic stenosis caused by single coronary artery in dogs: Four cases (1965-1984), 115
Bilateral congenital cysts in the frontal sinuses of a horse, 453
Multiple nonlethal congenital anomalies in a llama, 630
Eyelid malformation in four cockatiels, 1490
Continuing Education—Courses in continuing education, 140, 1150

CONVENTION SPOTLIGHT
Computer seminar designed to improve epidemiologic skills, 1362
Anglers away, 1367
Corticosteroids—Clinical remission following plasmapheresis and corticosteroid treatment in a dog with acquired myasthenia gravis, 1276
Corynebacterium spp—Differential antibody responses to *Corynebacterium pseudotuberculosis* in sheep with naturally acquired caseous lymphadenitis, 1609

COVER PICTURES
Always a Winner by Christine Picavet, 387
Shepherdess with Her Flock and Dog by Jean-François Millet, 675
Woman with a Cat by Auguste Renoir, 995
Anatone Cowboy, by David T. Roen, 1195
Not the baby anymore, by Eva M. Stumpff, 1555
The Greyhounds of the Comte de Choiseul by Gustave Courbet, 1731
Great-Grandaddy, 1914 by M. Lynne Kesel, 1899
Cryptococcosis—Clinical evaluation of a cryptococcal antigen latex agglutination test for diagnosis of cryptococcosis in cats, 1470
Cryptorchidism—Diagnostic ultrasonography for evaluation of cryptorchidism in horses, 297

D

Deaths, 40, 208, 404, 536, 692, 852, 1028, 1222, 1376, 1576, 1766, 1930
Dermatitis—Naltrexone for treatment of acral lick dermatitis in dogs, 1073

DERMATOLOGY
Calcinosis circumscripta of the metacarpal pad in a dog, 113
Cutaneous mucinous vesiculation in a dog with hypothyroidism, 757
Generalized lentigines in a silver cat, 1500
Diabetes Mellitus—High serum trypsin-like immunoreactivity secondary to pancreatitis in a dog with exocrine pancreatic insufficiency,623

DIARRHEA
Attaching and effacing *Escherichia coli* infection as a cause of diarrhea in young calves, 897
Electrolyte abnormalities associated with diarrhea in rhesus monkeys: 100 cases (1986-1987), 1654

DIFFICULT DERMATOLOGIC DIAGNOSIS
Food hypersensitivity in a cat, 225
Staphylococcal folliculitis in a dog, 1223

Digoxin—Efficacy of digoxin for treatment of cats with dilated cardiomyopathy, 1463
Dihydrostreptomycin—Antimicrobial therapy for rams with *Brucella ovis* infection of the urogenital tract, 605
Dilated Cardiomyopathy—Efficacy of digoxin for treatment of cats with dilated cardiomyopathy, 1463
Dolphins—Hepatitis B-like infection in a Pacific white-sided dolphin *(Lagenorhynchus obliquidens)*, 127

DRUGS
Drug-associated aplastic anemia in dogs: 8 cases (1984-1988), 472
Control of therapeutic drugs, 520
Drug therapy in cats: Mechanisms and avoidance of adverse drug reactions, 1297
Drug therapy in cats: A systems approach, 1502
Drug therapy in cats: A therapeutic category approach, 1659
Drug therapy in cats: Recommended dosing regimens, 1845

E

Ear—Total ear canal ablation combining bulla osteotomy and curettage in dogs with chronic otitis externa and media, 84
Ear Mites—Use of ivermectin for treatment of ear mite infestation in rabbits, 1139

ECG OF THE MONTH
Atrial fibrillation in a cow with meningitis, 56
Ventricular bigeminy and tachycardia in a 1-day-old colt anesthetized for surgery, 420
Questions ECG interpretation, 521, 834
First-degree and Mobitz type I-A second-degree A-V block with uniform ventricular escape beats in a dog, 728
Paroxysmal tachycardia in a cat with hypertrophic cardiomyopathy, 1044
Sinus arrest and idioventricular rhythm in a dog with an elongated soft palate, 1392
Atrial fibrillation and left anterior fascicular block in a cat with hypertrophic cardiomyopathy, 1786

ECONOMIC NOTE
Trend in real starting salaries of US veterinary medical college graduates, 1980-1989, 348

ECONOMICS
Estimating income losses and other preventable costs caused by congenital toxoplasmosis in people in the United States, 249
Concerned about poverty-level wages for new graduates, 1352
Veterinary fees, 1352

EDGE OF EDUCATION
More on Tufts' student surgery program, 184
Interinstitutional Veterinary Cytology Resource Center developed at Purdue, 195
Who will we find in the funnel to the future?, 531

Education—Abbreviations and neologisms in clinical veterinary medical education: Does everyone understand what we are saying?, 570
Letters: 1200, 1201

Ehrlichia spp
Seroepidemiologic survey of antibodies to *Ehrlichia equi* in horses of northern California, 1962
Serodiagnosis of equine monocytic ehrlichiosis in selected groups of horses in Minnesota, 1967

Electrolytes—Electrolyte abnormalities associated with diarrhea in rhesus monkeys: 100 cases (1986-1987), 1654
Encephalitis—Protozoal encephalomyelitis in horses: 82 cases (1972-1986), 632
Encephalopathy, Spongiform—Reports from an International Roundtable on Bovine Spongiform Encephalopathy, 1673
Endocrinology—Delayed growth in two German Shepherd Dog littermates with normal serum concentrations of growth hormone, thyroxine, and cortisol, 77

ENDOSCOPY
Endoscopic evaluation of exercise-induced pulmonary hemorrhage and chronic obstructive pulmonary disease in association with poor performance in racing Standardbreds, 443
Letter: 1563
Comparisons between endoscopic and histologic evaluation of the gastrointestinal tract in dogs and cats: 75 cases (1984-1987), 635
Endoscopic evaluation of changes in gastric lesions of Thoroughbred foals, 1623

Enteropathy, Protein-Losing—Lymphocytic-plasmacytic enteritis in two horses, 1995
Enzyme-Linked Immunosorbent Assay—Prevalence of antithyroglobulin antibodies detected by enzyme-linked immunosorbent assay of canine serum, 745
Eperythrozoonosis—*Eperythronozoon wenyonii* infection in dairy cattle, 1244
Epidemiology—Risk factors for *Haemobartonella felis* infection in cats, 96
Epididymitis—Methods for control of lamb epididymitis in large purebred flocks, 1110
Epiglottis—Transendoscopic contact neodymium:yttrium aluminum garnet laser correction of epiglottic entrapment in standing horses, 1971

EQUINE SPECIES
Cytologic and bacteriologic evaluation of tracheobronchial aspirates from clinically normal foals, 70
Disseminated coccidioidomycosis in a horse with osteomyelitis, 106
Ileocecal intussusception in horses: 26 cases (1981-1988), 121
Diagnostic ultrasonography for evaluation of cryptorchidism in horses, 297
Evaluation of an automated tabletop blood biochemical analyzer for the veterinary clinical pathology laboratory, 307
Systemic amyloidosis in a mare, 323
Gastric rupture in horses: 50 cases (1979-1987), 333
Guarded tracheal swabbing, 392
Ventricular bigeminy and tachycardia in a 1-day-old colt anesthetized for surgery, 420
Long-term jugular vein catheterization in horses, 425
Evaluation of upper respiratory tract function during strenuous exercise in racehorses, 431
Comparison of bacteriologic culture of blood and necropsy specimens for determining the cause of foal septicemia: 47 cases (1978-1987) (Pub Dec 15, 1989, p 1759)
Correction: 438
Carbon dioxide laser ablation for treatment of limbal squamous cell carcinoma in horses, 439
Letter: 1009
Endoscopic evaluation of exercise-induced pulmonary hemorrhage and chronic obstructive pulmonary disease in association with poor performance in racing Standardbreds, 443
Letter: 1563
Anatomy of the dorsoscapular ligament of horses, 446
Cimetidine for treatment of melanomas in three horses, 449
Letter: 1201
Bilateral congenital cysts in the frontal sinuses of a horse, 453
Treatment of right dorsal ulcerative colitis in a horse, 455
Probable paratuberculosis in a Sicilian ass, 459
Enteric pythiosis in a horse, 462
Hepatocellular carcinoma associated with erythrocytosis and hypoglycemia in a yearling filly, 465
Pericarditis in horses: Six cases (1982-1986), 468
Intraocular silicone prostheses in a dog and a horse with corneal lacerations, 617
Protozoal encephalomyelitis in horses: 82 cases (1972-1986), 632
A survey of equine parasite control practices in Tennessee, 712
Letters: 1353, 1738
Anaerobic bacterial pneumonia with septicemia in two racehorses, 941
Contracture test and histologic and histochemical analyses of muscle biopsy specimens from horses with exertional rhabdomyolysis, 1077
Changes in accessory sex glands of stallions after sexual preparation and ejaculation, 1084
Halicephalobus (Micronema) deletrix infection in two half-sibling foals, 1127
Differentiation between intra-abdominal neoplasms and abscesses in horses, using clinical and laboratory data: 40 cases (1973-1988), 1130
Displacement of the navicular bone and avulsion fracture in a horse, 1147
Serologic survey for *Borrelia burgdorferi* antibody in horses referred to a mid-Atlantic veterinary teaching hospital, 1255
Decreased erythrocyte potassium concentration associated with exercise-related myopathy in horses, 1259
Fracture of the dorsomedial surface of the medial trochlear ridge in a horse, 1307
Resistance to development of equine ehrlichial colitis in experimentally inoculated horses and ponies, 1478
Effects of furosemide on the racing times of Thoroughbreds, 1604
Epidemiologic study of salmonellae shedding in the feces of horses and potential risk factors for development of the infection in hospitalized horses, 1617
Endoscopic evaluation of changes in gastric lesions of Thoroughbred foals, 1623
Ulcerative duodenitis with luminal constriction in two horses, 1628
Ischemic optic neuropathy and blindness after arterial occlusion for treatment of guttural pouch mycosis in two horses, 1631
Surgical repair of ruptured trachea in a horse, 1635
Pleuroscopic diagnosis of disseminated hemangiosarcoma in a horse, 1639
Recurrent torsion of the spermatic cord and scrotal testis in a stallion, 1641
Defect within the superficial digital flexor tendon in a horse, 1671
Melanoma as a cause of spinal cord compression in two horses, 1820
Sterile nodular panniculitis in five horses, 1823
Intra-abdominal hemorrhage associated with a granulosa-thecal cell neoplasm in a mare, 1827
Combined treatment of ocular squamous cell carcinoma in a horse, using radiofrequency hyperthermia and interstitial ^{198}Au implants, 1831
Ultrasonographic findings in horses with cholelithiasis: Eight cases (1985-1987), 1836
Chip fracture of the palmaromedial aspect of the radial carpal bone in a horse, 1859
There's no good way to euthanatize a horse, 1942
Seroepidemiologic survey of antibodies to *Ehrlichia equi* in horses of northern California, 1962
Identification of anatomic features of the equine clitoris as potential growth sites for *Taylorella equigenitalis*, 1965
Serodiagnosis of equine monocytic ehrlichiosis in selected groups of horses in Minnesota, 1967
Transendoscopic contact neodymium:yttrium aluminum garnet laser correction of epiglottic entrapment in standing horses, 1971
Nonulcerative keratouveitis in five horses, 1985
Surgical treatment of tarsal sheath effusion associated with an exostosis on the calcaneus of a horse, 1992

Lymphocytic-plasmacytic enteritis in two horses, 1995
Squamous cell carcinoma originating from an epithelial scar in a horse, 1999
Bilateral renal dysplasia with nephron hypoplasia in a foal, 2001
African horse sickness: A continuing menace, 2019
Obstructive small intestinal disease in a foal, 2023

ERYTHROCYTOSIS
Hepatocellular carcinoma associated with erythrocytosis and hypoglycemia in a yearling filly, 465
Transient glomerulonephropathy associated with primary erythrocytosis in a dog, 620

Erythromycin—Efficacies of erythromycin and chloramphenicol in extinguishing fecal shedding of *Campylobacter jejuni* in dogs, 1069
Escherichia coli—Attaching and effacing *Escherichia coli* infection as a cause of diarrhea in young calves, 897
Esophagus—Megaesophagus in two cats, 763

EUTHANASIA
Concerned about euthanasia of healthy, homeless animals, 10
There's no good way to euthanatize a horse, 1942

EXERCISE
Evaluation of upper respiratory tract function during strenuous exercise in racehorses, 431
Endoscopic evaluation of exercise-induced pulmonary hemorrhage and chronic obstructive pulmonary disease in association with poor performance in racing Standardbreds, 443
Letter: 1563

EYE
Carbon dioxide laser ablation for treatment of limbal squamous cell carcinoma in horses, 439
Letter: 1007
Intraocular disease associated with feline immunodeficiency virus infection in cats, 1116
Eyelid malformation in four cockatiels, 1490
Combined treatment of ocular squamous cell carcinoma in a horse, using radiofrequency hyperthermia and interstitial ^{198}Au implants, 1831

F

Fascioliasis—Potential for the spread of *Fasciola hepatica* in cattle in Oklahoma, 1090

FDA VETERINARY NOTE
An FDA perspective on drug use in horses, 1388

Feces—Epidemiologic study of salmonellae shedding in the feces of horses and potential risk factors for development of the infection in hospitalized horses, 1617

FELINE IMMUNODEFICIENCY VIRUS
Myelitis in a cat infected with *Toxoplasma gondii* and feline immunodeficiency virus, 316
Intraocular disease associated with feline immunodeficiency virus infection in cats, 1116

FELINE SPECIES
Risk factors for *Haemobartonella felis* infection in cats, 96
Fenvalerate/*N*,*N*-diethyl-*m*-toluamide (Deet) toxicosis in two cats, 100
Hypercalcemia in two cats with squamous cell carcinomas, 103
Food hypersensitivity in a cat, 225
Transmission of toxoplasmosis and the role of immunity in limiting transmission and illness, 233
Evaluation of an automated tabletop blood biochemical analyzer for the veterinary clinical pathology laboratory, 307
Myelitis in a cat infected with *Toxoplasma gondii* and feline immunodeficiency virus, 316
Comparison of serum and plasma taurine values in Bengal tigers with values in taurine-sufficient and -deficient domestic cats, 342
Randomized blind trial of a commercial FeLV vaccine, 611
Comparisons between endoscopic and histologic evaluation of the gastrointestinal tract in dogs and cats: 75 cases (1984-1987), 635
Megaesophagus in two cats, 763
Bacterial flora of the vagina and uterus of healthy cats, 902
Cold agglutinins in cats with haemobartonellosis, 907
Effect of diet on Heinz body formation in kittens, 910
Cat aggression redirected to people: 14 cases (1981-1987), 947
Paroxysmal tachycardia in a cat with hypertrophic cardiomyopathy, 1044
Prevalence of disease in nonviremic cats previously exposed to feline leukemia virus, 1049
Medical dissolution of feline struvite urocystoliths, 1053
Intraocular disease associated with feline immunodeficiency virus infection in cats, 1116
Primary hypoparathyroidism in a cat, 1285
Polycystic kidney disease in a family of Persian cats, 1288
Acquired myasthenia gravis in a cat with thymoma, 1291
Drug therapy in cats: Mechanisms and avoidance of adverse drug reactions, 1297
Epizootiologic evaluation and quantitative analysis of urinary calculi from 150 cats, 1459
Efficacy of digoxin for treatment of cats with dilated cardiomyopathy, 1463
Clinical evaluation of a cryptococcal antigen latex agglutination test for diagnosis of cryptococcosis in cats, 1470
Generalized lentigines in a silver cat, 1500
Drug therapy in cats: A systems approach, 1502
Drug therapy in cats: A therapeutic category approach, 1659
Atrial fibrillation and left anterior fascicular block in a cat with hypertrophic cardiomyopathy, 1786
Surgically induced tumor seeding in eight dogs and two cats, 1811
Effects of propylene glycol-containing diets on acetaminophen-induced methemoglobinemia in cats, 1816
Drug therapy in cats: Recommended dosing regimens, 1845
Evaluation of the efficacy and safety of two formulations of pyrantel pamoate in cats, 1991

FELINE LEUKEMIA VIRUS
Pitfalls of test interpretations, 10
Randomized blind trial of a commercial FeLV vaccine, 611
Prevalence of disease in nonviremic cats previously exposed to feline leukemia virus, 1049

Fenvalerate—Fenvalerate/*N*,*N*-diethyl-*m*-toluamide (Deet) toxicosis in two cats, 100

FERRETS
Mast cell tumors in three ferrets, 766
Evaluation of an inactivated rabies virus vaccine in domestic ferrets, 1614

FIRESIDE CHAT
'80s built foundation for profession in '90s, 395
Looking at the issues with a global eye, 1918

FLEAS
Ultrasonic flea collars, 833, 834
Opposing viewpoints on efficacy of ultrasonic flea collars, 1354, 1355

FOLLOW-UP STORY
Veterinarian sentenced to prison, fined, 396

FOOD ANIMAL ECONOMICS
Financial comparison of three testing strategies for detection of estrus in dairy cattle, 865
Herd benefit-to-cost ratio and effects of a bovine mastitis control program that includes blitz treatment of *Streptococcus agalactiae*, 1230

Prevalence of trichomoniasis among California beef herds, 1590
Veterinary and nonveterinary costs of disease in 29 California dairies participating in the National Health Monitoring System from 1988 to 1989, 1945

FOOD FOR THOUGHT FOR FOOD ANIMAL VETERINARIANS
Waiting for the Food and Drug Administration to respond to its advisory committee's recommendations, 222
It works in my practice, 576
Food animal practitioners and food safety, 872
Animals and the health of the nation, 1224
Letter: 1740
Production veterinary medicine versus "sick cow treatment," 1587
Use of biologics by food animal practitioners, 1937

FOOD SAFETY UPDATE
Listeria continues to cause problems, 19
Potential from biotechnology immeasurable, 20
Foodborne illnesses cost $4.8 billion in 1987, 21
Will use of beef hormones be "forced" to a halt?, 21
States and industry recommend ban on whole scallops, 21
Salmonella hazard increases in Europe, 850
Environmental contaminants in food animal products low, 850
Conference participants predict allergenic effects from veterinary drugs, 851
Pesticide monitoring results indicate food is safe, 851
Sulfamethazine tolerance reduced, 851
Hazard Analysis and Critical Care Point System could help standardize food safety, 1217
FSIS affirms rejection of HeartGuide program, 1217
Salmonella control program introduced, 1217
FSIS study exonerates milo feed as contaminant, 1218
Food notes, 1218
Anisakiasis becoming problem in United States, 1218
New opportunities land veterinarians in fish market, 1928
Animal parasite: misidentified?, 1928
FSIS recommends adoption of Codex tolerance, 1929
USDA reports on residues in imported meat, 1929
Drug reduces cholesterol content in eggs, 1929
Appointments, 1929

Foreign Meetings, 146, 356, 480, 642, 790, 956, 1157, 1311, 1517, 1696, 1865, 2030

FRACTURES
Use of flexible intramedullary rods for fixation of femoral fractures in eight dogs, 71
Full-length diaphyseal sequestrum as a consequence of segmental transverse fractures of the large metatarsal bone in a calf, 2006

G

Gastric Dilatation Volvulus—Aortic thromboembolism as a complication of gastric dilatation/volvulus in a dog, 1829
Gastric Mucosa—Endoscopic evaluation of changes in gastric lesions of Thoroughbred foals, 1623

GASTROINTESTINAL TRACT
Enhanced intestinal permeability to ^{51}Cr-labeled EDTA in dogs with small intestinal disease, 91
Ileocecal intussusception in horses: 26 cases (1981-1988), 121
Gastric rupture in horses: 50 cases (1979-1987), 333
Treatment of right dorsal ulcerative colitis in a horse, 455
Comparisons between endoscopic and histologic evaluation of the gastrointestinal tract in dogs and cats: 75 cases (1984-1987), 635
Coliform septicemia and pulmonary disease associated with canine parvoviral enteritis: 88 cases (1987-1988), 771
Use of transcolonic ^{99m}technetium-pertechnetate as a screening test for portosystemic shunts in dogs, 925
Ulcerative duodenitis with luminal constriction in two horses, 1628

Glomerulonephritis—Transient glomerulonephropathy associated with primary erythrocytosis in a dog, 620

Glucocorticoids—Effect of otic medications containing glucocorticoids on liver function test results in healthy dogs, 743
Goiter—Vaginal leiomyofibromatosis and goiter in a goat, 627

GROWTH
Delayed growth in two German Shepherd Dog littermates with normal serum concentrations of growth hormone, thyroxine, and cortisol, 77
Relationship of growth performance to pneumonia and atrophic rhinitis detected in pigs at slaughter, 881

Guttural Pouch—Ischemic optic neuropathy and blindness after arterial occlusion for treatment of guttural pouch mycosis in two horses, 1631

H

Haemobartonella spp
Risk factors for *Haemobartonella felis* infection in cats, 96
Cold agglutinins in cats with haemobartonellosis, 907

Halicephalobus spp—*Halicephalobus (Micronema) deletrix* infection in two half-sibling foals, 1127
Hazards—AVMA guide to hazard communication, 224 (Insert)
Hemorrhage—Thrombocytopenia and hemorrhages in veal calves infected with bovine viral diarrhea virus, 590
Hepatitis B—Hepatitis B-like infection in a Pacific white-sided dolphin *(Lagenorhynchus obliquidens)*, 127
Heredity—Suspected familial renal disease in Chow Chows, 1279
Hernia, Scrotal—Use of ultrasonographic and nuclear imaging to diagnose scrotal hernia in a dog, 1834

HIP DYSPLASIA
New concepts of coxofemoral joint stability and development of a clinical stress-radiographic method for quantitating hip joint laxity in the dog, 59
Clinical evaluation of intertrochanteric osteotomy for treatment of dogs with early-stage hip dysplasia: 37 cases (1980-1987), 337

Histology—Comparisons between endoscopic and histologic evaluation of the gastrointestinal tract in dogs and cats: 75 cases (1984-1987), 635

THE HUMAN SIDE OF VETERINARY MEDICINE
Call for Dr. Wonderful, 229
Client relations when the animal dominates, 578
Veterinary success—luck or skill?, 854
Letter: 1740
Verbal cruelty to clients, 1226
Missing in action: Common decency, 1597
Doctor/staff communication: Practice bedrock, 1938

Hypercalcemia—Hypercalcemia in two cats with squamous cell carcinomas, 103
Hypermagnesemia—Adverse effect of orally administered magnesium hydroxide on serum magnesium concentration and systemic acid-base balance in adult cattle, 735
Hypertrophic Osteopathy—Hypertrophic osteopathy in a dog with a chronic lung abscess, 760
Hypoglycemia—Hepatocellular carcinoma associated with erythrocytosis and hypoglycemia in a yearling filly, 465
Hypoparathyroidism—Primary hypoparathyroidism in a cat, 1285
Hyposensitization—Experience with hyposensitization, 1910
Hypothyroidism—Cutaneous mucinous vesiculation in a dog with hypothyroidism, 757

I

IMMUNE RESPONSE
Clinical and immunologic response of cattle to administration of a vaccine containing modified-live bovine respiratory syncytial virus, 583
Differential antibody responses to *Corynebacterium pseudotu-*

berculosis in sheep with naturally acquired caseous lymphadenitis, 1609

Immunity—Transmission of toxoplasmosis and the role of immunity in limiting transmission and illness, 233
Immunoglobulins—Decreased colostral immunoglobulin absorption in calves with postnatal respiratory acidosis, 1239
Immunology—Induced *Tritrichomonas foetus* infection in beef heifers, 885
Impaired Veterinarians—Chemical dependency, 184, 185
Impedance Cardiography—Impedance cardiography by use of a spot-electrode array to track changes in cardiac output in anesthetized dogs, 1804

INSURANCE INFORMATION
AVMA offers comprehensive insurance plans for employees, 26
Loss control begins with Trust *Guidelines*, 397
Medicare Catastrophic Act repealed, 688
Veterinarians should measure ethylene oxide sterilizing practices against health risks, 1021
Veterinary students eligible for Group Health and Life coverage, 1367
Rising medical costs impact workers' compensation insurance, 1752

Interpretive Summaries, 4, 180, 388, 516, 676, 828, 996, 1196, 1350, 1556, 1732, 1900

INTESTINES, SMALL
Intestinal adenocarcinoma in a goat, 326
Enteric pythiosis in a horse, 462

Intussusception—Ileocecal intussusception in horses: 26 cases (1981-1988), 121
Iron Metabolism—Effect of dietary iron content on hematologic and other measures of iron adequacy in dogs, 749
Isotope Labeling—Enhanced intestinal permeability to ^{51}Cr-labeled EDTA in dogs with small intestinal disease, 91
Ivermectin—Use of ivermectin for treatment of ear mite infestation in rabbits, 1139

J

Journals—Coverage of sixty core veterinary medical journals by ten indexing and abstracting tools, 1931
Jugular Vein—Long-term jugular vein catheterization in horses, 425

K

Keratoconjunctivitis—Sulfonamides and keratoconjunctivitis sicca, 521
Keratouveitis—Nonulcerative keratouveitis in five horses, 1985

KIDNEY
Suspected familial renal disease in Chow Chows, 1279
Polycystic kidney disease in a family of Persian cats, 1288
Reduction of hydronephrosis and hydroureter associated with ectopic ureters in two dogs after ureterovesical anastomosis, 1497
Bilateral renal dysplasia with nephron hypoplasia in a foal, 2001

L

Laryngeal Paralysis—Peritracheal abscess associated with tracheal collapse and bilateral laryngeal paralysis in a dog, 1273

LASERS
Carbon dioxide laser ablation for treatment of limbal squamous cell carciroma in horses, 439
Letter: 1007
Transendoscopic contact neodymium:yttrium aluminum garnet laser correction of epiglottic entrapment in standing horses, 1971

LEGAL BRIEF
The mediation of malpractice claims, 54
Clarification of a Legal Brief case, 185
Advertising and ethics—is there still a relation?, 418
Animal rights and the veterinarian, 718
Correction: 1243
Evidence from and about animals, 1038
Restrictions on the establishment of a veterinary clinic, 1384
Animal control and the veterinarian, 1774

Leptospira spp—Isolation of *Leptospira interrogans* serovar *bratislava* from stillborn and weak pigs in Iowa, 1601

LETTERS
Kudos for authors of "Reflections," 10
Concerned about euthanasia of healthy, homeless animals, 10
Pitfalls of test interpretations, 10
Do animal rights advocates have special propensity for compassion?, 11, 12
Message to Tufts students, 12
Donation and typing of blood, 13
More on Tufts' student surgery program, 184
Chemical dependency, 184, 185
Clarification of a Legal Brief case, 185
Guarded tracheal swabbing, 392, 393
Shifting from information anxiety and guilt to information management, 520
Control of therapeutic drugs, 520
Questions ECG interpretation, 521
Sulfonamides and keratoconjunctivitis sicca, 521
Some thoughts on nutrition, marketing, and ancillary services, 522
Ear trimming in dogs, 679
More on "Speciesism is the natural order," 680
Sulfonamides and blood dyscrasias, 681
A call for common understanding of animal welfare, animal rights, and animal well-being, 832
Dooming animals to no life at all?, 833
Ultrasonic flea collars, 833, 834
Interpretation of "ECG of the Month" defended, 834
Likes stamps on *Directory* cover, 835
Comments on accreditation process, 1002
Still more on Tufts' student surgery program, 1002
Objects to repeated reference to "harmful use of healthy animals," 1006
Urges caution with use of lasers on lesions of suspected viral origin, 1007
Directions in veterinary education, 1007
Excision of melanomas in horses, 1201
Abbreviations and other shortcuts in communication, 1200, 1201
Proposed legislation on use of animals in Pennsylvania, 1200
Veterinary fees, 1352
Concerned about poverty-level wages for new graduates, 1352
In defense of "tubing" horses, 1353
Opposing viewpoints on efficacy of ultrasonic flea collars, 1354, 1355
Investigators relate experience with bovine somatotropin, 1562
Exercise-induced pulmonary hemorrhage, chronic obstructive pulmonary disease, and racing performance, 1563
Questions use of "atavism" in context of tube deworming of horses, 1738
More on "Dooming animals to no life at all?", 1738
And more yet on Tufts' student surgery program, 1739
Concerned that "fetal protection" policy may discriminate against women veterinarians, 1739
Suggestion for completing brucellosis eradication program, 1739
Comments on "Animals and the health of the nation," 1740
Article strikes nerve, 1740
Continuing dialogue on use of live dogs in student surgery, 1905, 1907
Comments on safety of methoprene, 1908

Experience with hyposensitization, 1910

Leukemia—Acute nonlymphocytic leukemia in a dog, 110
Ligaments—Anatomy of the dorsoscapular ligament of horses, 446

LIVER
Hepatocellular carcinoma associated with erythrocytosis and hypoglycemia in a yearling filly, 465
Generalized motor seizures after portosystemic shunt ligation in dogs: Five cases (1981-1988), 2014

Liver Function Tests—Effect of otic medications containing glucocorticoids on liver function test results in healthy dogs, 743

LLAMAS
Total parenteral nutrition in a neonatal llama, 319
Multiple nonlethal congenital anomalies in a llama, 630
Gemistocytic astrocytoma in a one-month-old llama, 2009
Reference ranges for hematologic and serum biochemical values in llamas *(Lama glama)*, 105

Lung—Hypertrophic osteopathy in a dog with a chronic lung abscess, 760
Lymphatic System—Lymphoproliferation in captive wild ruminants affected with malignant catarrhal fever: 25 cases (1977-1985), 1141
Lymphoma—Treatment of lymphoma in dogs, 774

M

Magnesium Hydroxide—Adverse effect of orally administered magnesium hydroxide on serum magnesium concentration and systemic acid-base balance in adult cattle, 735
Malignant Catarrhal Fever—Lymphoproliferation in captive wild ruminants affected with malignant catarrhal fever: 25 cases (1977-1985), 1141

MASTITIS
Evaluation of a scheme for predicting the gram-staining reaction of the organisms causing bovine mastitis, 597
In vitro and in vivo evaluation of a 0.5% chlorhexidine gluconate teat dip, 890
Mycoplasmal mastitis in a dairy herd, 1097
Serratia marcescens mastitis in a dairy herd, 1102
Herd benefit-to-cost ratio and effects of a bovine mastitis control program that includes blitz treatment of *Streptococcus agalactiae*, 1230
Mastitis control services and utilization of milk somatic cell count data by veterinarians in Ohio, 1956

Meat Inspection—A risk-assessed evaluation of postmortem meat inspection procedures for ovine thysanosomiasis, 860
Metatarsus—Full-length diaphyseal sequestrum as a consequence of segmental transverse fractures of the large metatarsal bone in a calf, 2006
Methoprene—Comments on safety of methoprene, 1908
Monensin—Acute monensin toxicosis in Stone sheep *(Ovis dalli stonei)*, blesbok *(Damaliscus dorcus phillipsi)*, and a Bactrian camel *(Camelus bactrianus)*, 131
Microbiology—Evaluation of a scheme for predicting the gram-staining reaction of the organisms causing bovine mastitis, 597
Muscular System—Muscular hypertrophy in beef cattle: Déjà vu, 413

MYASTHENIA GRAVIS
Clinical remission following plasmapheresis and corticosteroid treatment in a dog with acquired myasthenia gravis, 1276
Acquired myasthenia gravis in a cat with thymoma, 1291

Mycobacterium spp—Probable paratuberculosis in a Sicilian ass, 459
Mycoplasma spp—Mycoplasmal mastitis in a dairy herd, 1097

MYCOSES
Enteric pythiosis in a horse, 462
Ischemic optic neuropathy and blindness after arterial occlusion for treatment of guttural pouch mycosis in two horses, 1631

MYOPATHY
Contracture test and histologic and histochemical analyses of muscle biopsy specimens from horses with exertional rhabdomyolysis, 1077
Decreased erythrocyte potassium concentration associated with exercise-related myopathy in horses, 1259

N

Naltrexone—Naltrexone for treatment of acral lick dermatitis in dogs, 1073

NEOPLASIA
Hypercalcemia in two cats with squamous cell carcinomas, 103
Intestinal adenocarcinoma in a goat, 326
Carbon dioxide laser ablation for treatment of limbal squamous cell carcinoma in horses, 439
Letter: 1007
Cimetidine for treatment of melanomas in three horses, 449
Letter: 1201
Hepatocellular carcinoma associated with erythrocytosis and hypoglycemia in a yearling filly, 465
Vaginal leiomyofibromatosis and goiter in a goat, 627
Long-term survival after surgical excision of a schwannoma of the sixth cervical spinal nerve in a dog, 754
Mast cell tumors in three ferrets, 766
Bone scintigraphy in the initial evaluation of dogs with primary bone tumors, 917
Primary jejunal osteosarcoma associated with a surgical sponge in a dog, 935
Polyostotic hyperostosis associated with oviductal tumor in a cockatiel, 939
Differentiation between intra-abdominal neoplasms and abscesses in horses, using clinical and laboratory data: 40 cases (1973-1988), 1130
Acquired myasthenia gravis in a cat with thymoma, 1291
Preoperative measurement of canine primary bone tumors, using radiography and bone scintigraphy, 1474
Single-phase methylene diphosphate bone scintigraphy in the diagnostic evaluation of dogs with osteosarcoma, 1483
Circumocular pigmentation and incidence of ocular squamous cell tumors in *Bos taurus* and *Bos indicus* × *Bos taurus* cattle, 1605
Pleuroscopic diagnosis of disseminated hemangiosarcoma in a horse, 1639
Squamous cell carcinoma of the vulva in a cow, 1644
Comparison of survey radiography with ultrasonography and x-ray computed tomography for clinical staging of subcutaneous neoplasms in dogs, 1795
Assessment of survey radiography and comparison with x-ray computed tomography for detection of hyperfunctioning adrenocortical tumors in dogs, 1799
Surgically induced tumor seeding in eight dogs and two cats, 1811
Melanoma as a cause of spinal cord compression in two horses, 1820
Intra-abdominal hemorrhage associated with a granulosa-thecal cell neoplasm in a mare, 1827
Combined treatment of ocular squamous cell carcinoma in a horse, using radiofrequency hyperthermia and interstitial ^{198}Au implants, 1831
Squamous cell carcinoma originating from an epithelial scar in a horse, 1999
Gemistocytic astrocytoma in a one-month-old llama, 2009

Neostigmine—Atrial fibrillation associated with neostigmine administration in three cows, 329
Nervous System—Analysis of cerebrospinal fluid from the cerebellomedullary and lumbar cisterns of dogs with focal neurologic disease: 145 cases (1985-1987), 1841
Nutrition—Comparison of serum and plasma taurine values in Bengal tigers with values in taurine-sufficient and -deficient domestic cats, 342
Nutrition, Parenteral—Total parenteral nutrition in a neonatal llama, 319

O

OPHTHALMOLOGY
Comparison of serum and plasma taurine values in Bengal tigers with values in taurine-sufficient and -deficient domestic cats, 342
Intraocular silicone prostheses in a dog and a horse with corneal lacerations, 617
Repair of an anomalous nasolacrimal duct in a bull by use of conjunctivorhinostomy, 1647

Optic Neuropathy—Ischemic optic neuropathy and blindness after arterial occlusion for treatment of guttural pouch mycosis in two horses, 1631

ORTHOPEDICS
New concepts of coxofemoral joint stability and development of a clinical stress-radiographic method for quantitating hip joint laxity in the dog, 59
Use of flexible intramedullary rods for fixation of femoral fr. tures in eight dogs, 71
Clinical evaluation of intertrochanteric osteotomy for treatment of dogs with early-stage hip dysplasia: 37 cases (1980-1987), 337
Chronic osteomyelitis associated with orthopedic implants and cranial cruciate repair in three dogs, 1123
Partial rupture of the cranial cruciate ligament of the stifle in dogs: 25 cases (1982-1988), 1135

OSTEOMYELITIS
Disseminated coccidioidomycosis in a horse with osteomyelitis, 106
Chronic osteomyelitis associated with orthopedic implants and cranial cruciate repair in three dogs, 1123

Ovary—Intra-abdominal hemorrhage associated with a granulosa-thecal cell neoplasm in a mare, 1827

OUT AND ABOUT
US Animal Health Association issues resolutions, 27
Laboratory diagnosticians meet in Las Vegas, 29
Livestock electronic identification board meets, 29
Horse health studies planned, 30
Research conference turns 70, 207
Call for papers, 208
Delta Society probes relationships of people and animals in cities, 401
Correction: 692
Lawrence wins award, 402
Ultrasound society formed, 402
American Embryo Transfer Association meets, 403
International society meets in Australia, 536
AALAS introduces educational tools, 691
Cuba revisited, 848
Greyhound symposium held, 849
Call for papers, 849
"Gentle Doctor" series to resume in April, 1019
Holistic practitioners meet in Seattle, 1019
Spaceflight scratched by a heartbeat, 1207
Satellite program, "The Affection Connection," to begin in May, 1208
Animal poison information available round-the-clock, 1209
Veterinary recognition program established, 1209
Acupuncture fund announced, 1209
"Adopt-A-Classroom" teams veterinarians with teachers, 1210
Animal pain symposium slated for June, 1361
Whitney assumes new NIH post, 1361
World Veterinary Congress to be held in Rio de Janeiro, 1362
June is Adopt-a-Cat Month, 1569
NIH establishes research center, 1753
A century of contributions, 1753
Livestock institute board meets, 1927
Peace Corps video promotes Farmer-to-Farmer program, 1927
Davis elected to pharmacopeial committee, 1927

OVINE SPECIES
Acute monensin toxicosis in Stone sheep *(Ovis dalli stonei)*, blesbok *(Damaliscus dorcus phillipsi)*, and a Bactrian camel *(Camelus bactrianus)*, 131
Status of toxoplasmosis in sheep and goats in the United States, 259
Toxoplasmosis in sheep in northeastern United States, 263
Toxoplasmosis and other causes of abortions in sheep from north central United States, 287
Serologic and histologic diagnosis of toxoplasmic abortions in sheep in Oregon, 291
Brucella ovis excretion in semen of seronegative, clinically normal breeding rams, 313
Antimicrobial therapy for rams with *Brucella ovis* infection of the urogenital tract, 605
Efficacy of a vaccine to prevent *Chlamydia-* or *Campylobacter*-induced abortions in ewes, 731
A risk-assessed evaluation of postmortem meat inspection procedures for ovine thysanosomiasis, 860
Methods for control of lamb epididymitis in large purebred flocks, 1110
Brucella ovis epizootic in virgin ram lambs, 1120
Differential antibody responses to *Corynebacterium pseudotuberculosis* in sheep with naturally acquired caseous lymphadenitis, 1609
Acute oxalate poisoning attributable to ingestion of curly dock *(Rumex crispus)* in sheep, 1981

Oxalate—Acute oxalate poisoning attributable to ingestion of curly dock *(Rumen crispus)* in sheep, 1981
Oxytetracycline—Antimicrobial therapy for rams with *Brucella ovis* infection of the urogenital tract, 605

P

PAGES FROM THE PAST
The history of surgical drainage, 42
Diseases of the horse: The centennial of a great book, 226
Veterinarians challenge Dr. Robert Koch regarding bovine tuberculosis and public health, 574

Pancreas—High serum trypsin-like immunoreactivity secondary to pancreatitis in a dog with exocrine pancreatic insufficiency, 623
Panniculitis—Sterile nodular panniculitis in five horses, 1823
Parasite Control—A survey of equine parasite control practices in Tennessee, 712
Letters: 1353, 1738
Parasites—*Halicephalobus (Micronema) deletrix* infection in two half-sibling foals, 1127

PARATUBERCULOSIS
Probable paratuberculosis in a Sicilian ass, 459
Comparison of the complement fixation and agar gel immunodiffusion tests for diagnosis of subclinical bovine paratuberculosis, 604
Correction: 1076
Use of an enzyme-linked immunosorbent assay to estimate prevalence of paratuberculosis in cattle of Florida, 1251

Parvoviruses—Coliform septicemia and pulmonary disease associated with canine parvoviral enteritis: 88 cases (1987-1988), 771
Patent Ductus Arteriosus—Results of ligation of patent ductus arteriosus in dogs: 201 cases (1969-1988), 2011
Pericarditis—Pericarditis in horses: Six cases (1982-1986), 468
Permeability, Intestinal—Enhanced intestinal permeability to ^{51}Cr-labeled EDTA in dogs with small intestinal disease, 91

PHARMACOLOGY
Drug therapy in cats: Mechanisms and avoidance of adverse drug reactions, 1297
Drug therapy in cats: A systems approach, 1502
Drug therapy in cats: A therapeutic category approach, 1659
Drug therapy in cats: Recommended dosing regimens, 1845

Pigmentation—Circumocular pigmentation and incidence of ocular squamous cell tumors in *Bos taurus* and *Bos indicus* × *Bos taurus* cattle, 1605
Plasmapheresis—Clinical remission following plasmapheresis and

corticosteroid treatment in a dog with acquired myasthenia gravis, 1276
Pleural Fluid—Pleuroscopic diagnosis of disseminated hemangiosarcoma in a horse, 1639

PNEUMONIA
Relationship of growth performance to pneumonia and atrophic rhinitis detected in pigs at slaughter, 881
Anaerobic bacterial pneumonia with septicemia in two racehorses, 941
Measurement of conchal atrophy and pneumonic lesions and their association with growth rate in commingled feeder pigs, 1262

PORCINE SPECIES
Prevalence of toxoplasmosis in swine from Iowa, 266
Status of toxoplasmosis in pigs in the United States, 270
Seroprevalence of *Actinobacillus (Haemophilus) pleuropneumoniae* serotype-1 infection in swine herds in Quebec, 301
Antibody production and tissue irritation in swine vaccinated with *Actinobacillus* bacterins containing various adjuvants, 600
Reactivation of latent pseudorabies virus infection in vaccinated sows, 742
Excretion of porcine parvovirus through the genital tract of boars, 767
Factors associated with circulation of pseudorabies virus within swine herds, 877
Relationship of growth performance to pneumonia and atrophic rhinitis detected in pigs at slaughter, 881
Measurement of conchal atrophy and pneumonic lesions and their association with growth rate in commingled feeder pigs, 1262
Isolation of *Leptospira interrogans* serovar *bratislava* from stillborn and weak pigs in Iowa, 1601
Clinical, pathologic, and microbiologic findings of foot abscess in neonatal pigs, 1791

Potassium—Decreased erythrocyte potassium concentration associated with exercise-related myopathy in horses, 1259

PRACTICE MANAGEMENT CORNER
Staff meetings open doors to communication, 200
"How can I motivate my staff?", 840
Take steps to introduce market-driven services, 1754
Marketing seminar goes video, 1755

Prepuce—Preputial reconstruction in a dog, 1493
Propylene Glycol—Effects of propylene glycol-containing diets on acetaminophen-induced methemoglobinemia in cats, 1816
Prostate Gland—Comparison of two sample collection methods for quantitative bacteriologic culture of canine prostatic fluid, 1479
Protozoa—Protozoal encephalomyelitis in horses: 82 cases (1972-1986), 632

PSEUDORABIES
Survival of pseudorabies virus in aerosol, 906
Pseudorabies virus latency and reactivation in vaccinated swine, 916

Pseudorabies Virus—Factors associated with circulation of pseudorabies virus within swine herds, 877
Pulmonary Function—Management of tracheal stenosis in a dog, 931
Pulmonic Stenosis—Pulmonic stenosis caused by single coronary artery in dogs: Four cases (1965-1984), 115

R

Rabbits—Use of ivermectin for treatment of ear mite infestation in rabbits, 1139

RABIES
Compendium of Animal Rabies Control, 1990, 36
Evaluation of an inactivated rabies virus vaccine in domestic ferrets, 1614

RADIOGRAPHY
Avulsion of the urinary bladder in a dog, 137
Large prostate gland in a Tammar wallaby, 351
Osteolysis associated with multiple myeloma in a dog, 477
Subchondral cyst in the middle phalanx of a bull, 639
Tear in dura mater between T13 and L1 in a dog, 783
Displacement of the navicular bone and avulsion fracture in a horse, 1147
Fracture of the dorsomedial surface of the medial trochlear ridge in a horse, 1307
Preoperative measurement of canine primary bone tumors, using radiography and bone scintigraphy, 1474
Esophageal diverticulum in a dog, 1513
Defect within the superficial digital flexor tendon in a horse, 1671
Assessment of survey radiography and comparison with x-ray computed tomography for detection of hyperfunctioning adrenocortical tumors in dogs, 1799
Chip fracture of the palmaromedial aspect of the radial carpal bone in a horse, 1859
Obstructive small intestinal disease in a foal, 2023

Radiotherapy—Combined treatment of ocular squamous cell carcinoma in a horse, using radiofrequency hyperthermia and interstitial ^{198}Au implants, 1831

REFLECTIONS
Kudos for authors of "Reflections," 10
The best decision I ever made, 48
The path followed. . ., 406
The war is over—let's go to school, 708
A brief glance back at 45 years in veterinary education, 1030
The veterinarian is a comparative zoologist, 1378
A lifetime serving the dairy industry, 1776

REGULATORY FRONT
Growth enhancers: boon or boomerang for the pork industry?, 201
Compliance actions, 535
FDA finds no residues in milk; Weiss doubtful, 837
Weiss wants extra-label use policy eliminated, 838
Two drugs available only through pharmacists, 838
Bovine growth hormone raises national concern, 1018
SMZ studies planned, 1222
Appointments, 1222
Manufacturing of drugs: interpretation of federal regulations lies in eye of beholder, 1360
Warning: FDA may soon survey practice, 1360
Sulfonamide availability hinges on results of AHI studies, 1565
Veterinarians must register for DEA numbers, 1566
Council acts on biologics issues, 1567
Drug Availability Committee extended, 1567
Compliance actions, 1569
Case closed on milk residue issue, advisory group told, 1741
FDA reevaluating labeling policy for dually classified drugs, 1743
Twelve more states join pseudorabies fight, 1744
Agencies on collision course over brucellosis in Yellowstone, 1745
Livestock identification race continues, 1748

REPRODUCTION
Muscular hypertrophy in beef cattle: déjà vu, 413
Viewpoints on dairy herd fertility, 726
Correction: 1275
Financial comparison of three testing strategies for detection of estrus in dairy cattle, 865
Bacterial flora of the vagina and uterus of healthy cats, 902
Isolation of *Leptospira interrogans* serovar *bratislava* from stillborn and weak pigs in Iowa, 1601

REPRODUCTIVE TRACT
Polyostotic hyperostosis associated with oviductal tumor in a cockatiel, 939
Changes in accessory sex glands of stallions after sexual preparation and ejaculation, 1084

Research Roundup—Taking a close look at toxocariasis, 1009
Respiratory Syncytial Virus—Clinical and immunologic response of

cattle to administration of a vaccine containing modified-live bovine respiratory syncytial virus, 583

RESPIRATORY TRACT
Evaluation of upper respiratory tract function during strenuous exercise in racehorses, 431
Endoscopic evaluation of exercise-induced pulmonary hemorrhage and chronic obstructive pulmonary disease in association with poor performance in racing Standardbreds, 443
Letters: 1563
Coliform septicemia and pulmonary disease associated with canine parvoviral enteritis: 88 cases (1987-1988), 771

Rhesus Monkeys—Electrolyte abnormalities associated with diarrhea in rhesus monkeys: 100 cases (1986-1987), 1654
Ruminants—Lymphoproliferation in captive wild ruminants affected with malignant catarrhal fever: 25 cases (1977-1985), 1141

S

Salmonella spp—Epidemiologic study of salmonellae shedding in the feces of horses and potential risk factors for development of the infection in hospitalized horses, 1617

SAN ANTONIO MEETING, CONVENTION PROGRAM
Your invitation to San Antonio, 1399
1990 Convention Host Committee, 1400
Sessions of the Executive Board and House of Delegates, 1401
Agenda—House of Delegates, 1402
Point credit for reserve officers, 1402
1990 House of Delegates, 1403
House of Delegates Reference Committees, 1404
Message from Auxiliary president, 1405
1989-1990 Auxiliary roster, 1405
Auxiliary luncheon, 1405
Auxiliary to the AVMA activities, 1406
Student AVMA, 1406
Student AVMA Auxiliary, 1406
AVMA Placement Service, 1406
Career Opportunities Center, 1408
Educational exhibits, 1410
Autotutorial program, 1414
Alumni receptions, 1415
Sporting events, 1415
Tour information, 1416
Family night, 1418
Scientific Program Committee, 1417
Scientific program, 1420
Wednesday Continuing Education Spectacular, 1439
Personal and Professional Development Program, 1440
Other groups and activities, 1441
Programs of other groups, 1445

Sarcocystis spp—Condemnation of beef because of *Sarcocystis hirsuta* infection, 1095
Scapula—Anatomy of the dorsoscapular ligament of horses, 446

SCINTIGRAPHY
Bone scintigraphy in the initial evaluation of dogs with primary bone tumors, 917
Single-phase methylene diphosphate bone scintigraphy in the diagnostic evaluation of dogs with osteosarcoma, 1483

Semen—*Brucella ovis* excretion in semen of seronegative, clinically normal breeding rams, 313
Septicemia—Anaerobic bacterial pneumonia with septicemia in two racehorses, 941

SERODIAGNOSIS
Serologic aspects of toxoplasmosis, 277
Seroprevalence of *Actinobacillus (Haemophilus) pleuropneumoniae* serotype-1 infection in swine herds in Quebec, 301
Persistence of antibodies to *Borrelia burgdorferi* in dogs of New York and Connecticut, 1064
Clinical evaluation of a cryptococcal antigen latex agglutination test for diagnosis of cryptococcosis in cats, 1470
Seroepidemiologic survey of antibodies to *Ehrlichia equi* in horses of northern California, 1962
Serodiagnosis of equine monocytic ehrlichiosis in selected groups of horses in Minnesota, 1967
Serratia spp—*Serratia marcescens* mastitis in a dairy herd, 1102

SHUNT, PORTOSYSTEMIC
Use of transcolonic ^{99m}technetium-pertechnetate as a screening test for portosystemic shunts in dogs, 925
Generalized motor seizures after portosystemic shunt ligation in dogs: Five cases (1981-1988), 2014

Sialolith—Sialolithiasis in two chimpanzees, 1651
Sinuses, Frontal—Bilateral congenital cysts in the frontal sinuses of a horse, 453
Skin—Mast cell tumors in three ferrets, 766
Somatotropin—Investigators relate experience with bovine somatotropin, 1562

SPECIAL COMMENTARY
Abbreviations and neologisms in clinical veterinary medical education: Does everyone understand what we are saying?, 570
Letters: 1200, 1201
Viewpoints on dairy herd fertility, 726
Correction: 1275
The politics of formula-fed veal calf production, 1578
There's no good way to euthanatize a horse, 1942

SPECIAL REPORTS
A survey of equine parasite control practices in Tennessee, 712
Letters: 1353, 1738
A risk-assessed evaluation of postmortem meat inspection procedures for ovine thysanosomiasis, 860
Coverage of sixty core veterinary medical journals by ten indexing and abstracting tools, 1931

Spermatic Cord—Recurrent torsion of the spermatic cord and scrotal testis in a stallion, 1641

SPINAL CORD
Long-term survival after surgical excision of a schwannoma of the sixth cervical spinal nerve in a dog, 754
Melanoma as a cause of spinal cord compression in two horses, 1820
Spot Electrode—Impedance cardiography by use of a spot-electrode array to track changes in cardiac output in anesthetized dogs, 1804

State Board Examinations, 147, 646, 792, 959, 1162, 1315, 1518, 1699, 1870, 2033

Stifle—Partial rupture of the cranial cruciate ligament of the stifle in dogs: 25 cases (1982-1988), 1135
Struvite—Medical dissolution of feline struvite urocystoliths, 1053

STUDENT AND SCHOOL SCENES
University establishes dental residency, 32
Human-animal bond program gives veterinary students practical experience, 32
New computer system upgrades *Intervet*, 33
Atlantic Veterinary College awarded charter, 33
Feline clinical residency planned, 33
Schools receive $2 million in Pew grants, 527
New dean at Illinois, 532
New computer applications advance research and teaching, 533
Library offers services to practitioners, 534
Appointments, 534
Thawley named dean at Minnesota, 689
Pathology externships available, 689
Rate of enrollment decline eases, 842
Skeletons decorate hallways at North Carolina State University, 1024
Appointments, 1025

Student AVMA symposium held, 1375
Professor bequeaths $1 million chair, 1376
First class graduates from Atlantic Veterinary College, 1763
NCSU offers microsurgery course, 1764
Biomedical illustration program accredited, 1764
Student chapters of ASLAP welcomed, 1764
McCarthy recognized, 1764
Veterinary students run pet loss hotline, 1765
Schools receive supplies, instruments, 1765
North Carolina receives grant, 1765
Appointments, 1765
Scholarships awarded to CSU, 1923
University of Georgia receives equine research grant, 1923
Appointments, 1923

SURGERY
Total ear canal ablation combining bulla osteotomy and curettage in dogs with chronic otitis externa and media, 84
Carbon dioxide laser ablation for treatment of limbal squamous cell carcinoma in horses, 439
Letter: 1007
Third-degree perineal lacerations and rectovestibular fistulas in cattle: 20 cases (1981-1988), 768
Management of tracheal stenosis in a dog, 931
Preputial reconstruction in a dog, 1493
Surgical repair of ruptured trachea in a horse, 1635
Repair of an anomalous nasolacrimal duct in a bull by use of conjunctivorhinostomy, 1647
Impedance cardiography by use of a spot-electrode array to track changes in cardiac output in anesthetized dogs, 1804
Surgically induced tumor seeding in eight dogs and two cats, 1811
Surgical treatment of tarsal sheath effusion associated with an exostosis on the calcaneus of a horse, 1992

Surgical Sponge—Primary jejunal osteosarcoma associated with a surgical sponge in a dog, 935

T

Tarsus—Surgical treatment of tarsal sheath effusion associated with an exostosis on the calcaneus of a horse, 1992

TAURINE
Comparison of serum and plasma taurine values in Bengal tigers with values in taurine-sufficient and -deficient domestic cats, 342
Efficacy of digoxin for treatment of cats with dilated cardiomyopathy, 1463

Taylorella equigenitalis—Identification of anatomic features of the equine clitoris as potential growth sites for *Taylorella equigenitalis*, 1965

TECHNICIANS TODAY
CVTAT reconsiders name, 203
New technician examination format implemented, 203
Posters developed by veterinary technician association, 1020
Veterinary technician committee meets, 1762
Technician educator's dedication recognized, 1762

TESTIS
Diagnostic ultrasonography for evaluation of cryptorchidism in horses, 297
Recurrent torsion of the spermatic cord and scrotal testis in a stallion, 1641

Thrombocytopenia—Thrombocytopenia and hemorrhages in veal calves infected with bovine viral diarrhea virus, 590
Thromboembolism—Aortic thromboembolism as a complication of gastric dilatation/volvulus in a dog, 1829
Thrombosis—Caudal vena caval thrombosis in a cow, 1294
Thymus—Acquired myasthenia gravis in a cat with thymoma, 1291
Thyroglobulin—Prevalence of antithyroglobulin antibodies detected by enzyme-linked immunosorbent assay of canine serum, 745
Thyroid Gland—Plasma von Willebrand factor concentration and thyroid function in dogs, 921
Thysanosoma spp—A risk-assessed evaluation of postmortem meat inspection procedures for ovine thysanosomiasis, 860

TOPICS IN DRUG THERAPY
Pharmacologic features of butorphanol in dogs and cats, 135
Sulfonamides and blood dyscrasias, 681
Iatrogenic adrenocortical insufficiency in dogs, 1144

TOXICOSES
Fenvalerate/*N,N*-diethyl-*m*-toluamide (Deet) toxicosis in two cats, 100
Acute monensin toxicosis in Stone sheep *(Ovis dalli stonei)*, blesbok *(Damaliscus dorcus phillipsi)*, and a Bactrian camel *(Camelus bactrianus)*, 131
Hypercalcemia secondary to cholecalciferol rodenticide toxicosis in two dogs, 1265
Salmon calcitonin as adjunct treatment for vitamin D toxicosis in a dog, 1269
National Animal Poison Information Network (NAPINet): Veterinary medicine's new dimension in human-animal service, 1768
Effects of propylene glycol-containing diets on acetaminophen-induced methemoglobinemia in cats, 1816

Toxicoses, Plant—Acute oxalate poisoning attributable to ingestion of curly dock *(Rumen crispus)* in sheep, 1981
Toxocariasis—Taking a close look at toxocariasis, 1009

TOXOPLASMOSIS
Transmission of toxoplasmosis and the role of immunity in limiting transmission and illness, 233
Toxoplasmosis in human beings, 240
Estimating income losses and other preventable costs caused by congenital toxoplasmosis in people in the United States, 249
Status of toxoplasmosis in cattle in the United States, 257
Status of toxoplasmosis in sheep and goats in the United States, 259
Toxoplasmosis in sheep in northeastern United States, 263
Prevalence of toxoplasmosis in swine from Iowa, 266
Status of toxoplasmosis in pigs in the United States, 270
Toxoplasma gondii infections in wildlife, 274
Serologic aspects of toxoplasmosis, 277
Strategies for control of toxoplasmosis, 281
Toxoplasmosis and other causes of abortions in sheep from north central United States, 287
Serologic and histologic diagnosis of toxoplasmic abortions in sheep in Oregon, 291
Prevalence of *Toxoplasma gondii* antibodies in dairy goats from 1982 to 1984, 295
Myelitis in a cat infected with *Toxoplasma gondii* and feline immunodeficiency virus, 316
Acute toxoplasmosis in a camel, 347

TRACHEA
Peritracheal abscess associated with tracheal collapse and bilateral laryngeal paralysis in a dog, 1273
Surgical repair of ruptured trachea in a horse, 1635

Tracheal Stenosis—Management of tracheal stenosis in a dog, 931

Tritrichomonas spp
Induced *Tritrichomonas foetus* infection in beef heifers, 885
Prevalence of trichomoniasis among California beef herds, 1590

Trypsin-Like Immunoreactivity—High serum trypsin-like immunoreactivity secondary to pancreatitis in a dog with exocrine pancreatic insufficiency, 623

U

Ulcer—Ulcerative duodenitis with luminal constriction in two horses, 1628

ULTRASONOGRAPHY
Diagnostic ultrasonography for evaluation of cryptorchidism in horses, 297

Retrobulbar mass in a dog, 951
Changes in accessory sex glands of stallions after sexual preparation and ejaculation, 1084
Polycystic kidney disease in a family of Persian cats, 1288
Comparison of two sample collection methods for quantitative bacteriologic culture of canine prostatic fluid, 1479
Comparison of survey radiography with ultrasonography and x-ray computed tomography for clinical staging of subcutaneous neoplasms in dogs, 1795
Use of ultrasonographic and nuclear imaging to diagnose scrotal hernia in a dog, 1834
Ultrasonographic findings in horses with cholelithiasis: Eight cases (1985-1987), 1836

UNDER THE UMBRELLA
Veterinary surgeons hold forum, 24
ABVP invites candidates for two new practice categories, 25
Correction, 25
AABP members converge in Kansas City, 197
Microbiologists certified, 535
Radiologists certified, 535
Ophthalmologists meet, 535
AAEP breaks record in Boston, 685
Equine scholarships awarded, 687
Zoo veterinarians meet, 687
Pathologists certify diplomates, 1022
ACVPM offers awards, 1022
Free eye clinic for assistance dogs to be sponsored by ACVO, 1023
Dermatology Congress debuts, 1206
Nutrition diplomates named, 1206
Swine welfare addressed at AASP meeting, 1370
New specialty recognized by Advisory Board, 1373
Feline practitioners announce plans for academy, 1575
"Welcome the world"—theme of 1990 AAHA meeting, 1757
ACVPM celebrates 40th year, 1759
Veterinary surgeons celebrate 25th anniversary, 1759
Call for papers, 1930

Ureter—Reduction of hydronephrosis and hydroureter associated with ectopic ureters in two dogs after ureterovesical anastomosis, 1497
Urinary Bladder—Macrohematuria and life-threatening anemia attributable to subepithelial vascular ectasia of the urinary bladder in a dog, 1487

URINARY CALCULI
Medical dissolution of feline struvite urocystoliths, 1053
Epizootiologic evaluation and quantitative analysis of urinary calculi from 150 cats, 1459

Urogenital Tract—Identification of anatomic features of the equine clitoris as potential growth sites for *Taylorella equigenitalis*, 1965

V

VACCINATION
Clinical and immunologic response of cattle to administration of a vaccine containing modified-live bovine respiratory syncytial virus, 583
Randomized blind trial of a commercial FeLV vaccine, 611
Evaluation of an inactivated rabies virus vaccine in domestic ferrets, 1614
Vaccines, Live—Risks associated with use of live vaccines, 1851
Vagina—Vaginal leiomyofibromatosis and goiter in a goat, 627
Veal Calf Husbandry—The politics of formula-fed veal calf production, 1578
Vena Cava—Caudal vena caval thrombosis in a cow, 1294

VETERINARIANS AFIELD
Peace Corps veterinarians report from Morocco, 1013

VETERINARY EDUCATION
Message to Tufts students, 12
Comments on accreditation program, 1002
Still more on Tufts' student surgery program, 1002, 1003
Objects to repeated reference to "harmful use of healthy animals," 1006
Directions in veterinary education, 1007
And more yet on Tufts' student surgery program, 1739
Continuing dialogue on use of live dogs in student surgery, 1905, 1907

VETERINARY PRACTICE
Shifting from information anxiety and guilt to information management, 520
Some thoughts on nutrition, marketing, and ancillary services, 522
Concerned that "fetal protection" policy may discriminate against women veterinarians, 1739

Virology—Hepatitis B-like infection in a Pacific white-sided dolphin *(Lagenorhynchus obliquidens)*, 127
von Willebrand Disease—Plasma von Willebrand factor concentration and thyroid function in dogs, 921

W

Wallabies—Large prostate gland in a Tammar wallaby, 351

WASHINGTON WATCH
Congress gears up for 1990, 22
National Pet Week commemorative resolution moves through Congress, 683
AVMA testifies on research funding, 684
African horse sickness precautions considered, 1221
Pseudorabies hearings held, 1221
Senate passes research facility act, 1221
Veterinarians serve in legislatures, 1222
Dierauf named third AVMA Congressional Fellow, 1920
On the Washington scene, 1920
AVMA recommends research titles to Congress, 1920
AVMA reveals survey results, 1921
Veterinarians participate in food, agricultural policy programs, 1921

WHAT IS YOUR DIAGNOSIS?
Avulsion of the urinary bladder in a dog, 137
Large prostate gland in a Tammar wallaby, 351
Osteolysis associated with multiple myeloma in a dog, 477
Subchondral cyst in the middle phalanx of a bull, 639
Tear in dura mater between T13 and L1 in a dog, 783
Retrobulbar mass in a dog, 951
Displacement of the navicular bone and avulsion fracture in a horse, 1147
Fracture of the dorsomedial surface of the medial trochlear ridge in a horse, 1307
Esophageal diverticulum in a dog, 1513
Defect within the superficial digital flexor tendon in a horse, 1671
Chip fracture of the palmaromedial aspect of the radial carpal bone in a horse, 1859
Obstructive small intestinal disease in a foal, 2023

X

X-RAY COMPUTED TOMOGRAPHY
Comparison of survey radiography with ultrasonography and x-ray computed tomography for clinical staging of subcutaneous neoplasms in dogs, 1795
Assessment of survey radiography and comparison with x-ray computed tomography for detection of hyperfunctioning adrenocortical tumors in dogs, 1799

Y

YOUR AUXILIARY IN ACTION
Auxiliary boosts veterinary profession, 204
Auxiliary focuses on membership, 205
Senior students honored, 205